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Patient-Focused Care: The Restructuring of Healthcare

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PATIENT-FOCUSED CARE: THE RESTRUCTURING OF HEALTHCARE

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ABSTRACT

This thesis will focus on the study of restructuring or redesigning the current healthcare delivery system, with a primary emphasis on the concept of patient-focused care. Patient-focused care is defined as the redesign of patient care so that hospital resources and personnel are organized around patients, rather than around various specialized departments.

An overview of the healthcare delivery system prior to 1980 pointed out that healthcare expenses were increasing at far too rapid a rate. The number of Americans without healthcare benefits was climbing and medical record management was out of control. Hospital information systems were obsolete and professional territorialism resulted in skyrocketing expenses. Additionally, the government began to over regulate providers, consumers of healthcare were becoming increasingly dissatisfied with the services provided, insurance companies were putting pressure on providers and the necessity for more advanced technology became evident.

Once organizations came to the realization that the need to change was necessary to remain financially viable, the process of change began to occur. The areas of change affected providers at all levels of management, employees, physicians, as well as third party payors and the recipients of healthcare.

The purpose of this study is to point out that in order for patient-focused care to be successful, institutions need to update or upgrade their existing information systems. Several case studies were reviewed to support the fact that information systems are critical to the success of implementing the patient-focused concept of delivering care.

Additional information to support the benefits of patient-focused care is provided through the evaluation of consumer satisfaction tools as wells as tables and graphs to support financial savings.

Results of the study of the research, as well as the analysis of the data provided, created enough evidence to suggest that the hypothesis be accepted to conclude that information systems must be upgraded and/or updated in order to be able to support the rapid changes necessary for the delivery of healthcare.

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Chapter I

INTRODUCTION

Overview

When one listens to the news on radio and television, reads the daily newspaper or skims through major magazines, the topic of steadily increasing healthcare costs, and the necessity for reform is recognized. It is apparent that the cost of healthcare and a cost-efficient method of delivery for these services must be established. The consumers of these services, be they individuals, employers and other third party payors, including insurance companies, now demand change. Someone has to take command of this issue and bring costs under control. A common statistic accepted throughout the media is that fourteen percent of the Gross National Product (GNP) is spent on healthcare. Another prevalent statement is that thirty seven million Americans are uninsured and many millions more are under insured (DePorter 24). In order to understand the complexity and evolution of this situation one must review the historical data over the past thirty years.

History of Reimbursement

In 1965, a Social Security hospital insurance program was established for the aged. This was the birth of programs referred to

as Medicare and Medicaid. At this point in history hospitals and physicians were paid on a cost-based system. According to Gregg Zoller, Senior Vice President of Missouri Baptist Medical Center, regardless of the amount hospitals charged for services, the federal and state governments were willing to pay the bills. Even the cost of purchased capital equipment was reimbursed by the government, and hospitals were generating fantastic bottom lines.

It was not until 1981 that the Omnibus Budget Reconciliation Act mandated significant cuts in federal expenditures for health programs. Additionally the Tax Equity and Fiscal Responsibility Act of 1982 and the Social Security Amendments of 1983 established a prospective payment system to address the problem of cost increases in hospitals. Medicare deductibles were increased and a new reimbursement system for inpatient care was put into place. This was the beginning of a regulated reimbursement paid to healthcare providers based on costs of services provided. The Federal Government regulated reimbursement for Medicare patients to diagnosis-related groups or DRGs based on the hospital's case mix (Rakich 40). The Health Care Financing Administration (HCFA), a component of the Department of Health and Human Services (DHHS), became responsible for establishing the fixed rates and administering Medicare and Medicaid. The basic concept of this form of payment was that if hospitals could provide the services for less than the fixed rate, they were entitled to the difference; however, if their services cost more than they were reimbursed the difference had to

be made up from other sources. In many cases these additional expenses were passed on to those with either private insurance or no insurance (Rakich 57).

In 1984 the Omnibus Deficit Reduction Act (OBRA) extended Medicare as a secondary insurance for those sixty five and older who were still employed, placing more responsibility on insurance provided by employers. This in turn affected the premiums paid by employers, thereby increasing their operating expenses. In addition, the act froze Medicare payments to physicians and further reduced reimbursements to hospitals. Finally, in 1988, with the passage of the Medicare Catastrophic Coverage Act, all cost- sharing for inpatient hospital care, after the hospital deductible, was eliminated. As a result hospitals became responsible for the purchase of all capital equipment without government sharing in the expense (Source Book 79-82).

History of Healthcare Expenses

In a publication compiled for the American Hospital Association in 1991, the national health expenditure and how it related to the Gross National Product (GNP) was reviewed. In 1960, the GNP related to health expenditures was approximately five percent. In the 1970's, the percentage grew to over seven percent, and by 1980, had grown to nearly nine percent. It was in 1990 that the annual percentage of the GNP dedicated to

healthcare expenditures was over twelve percent for an estimated $676 billion and climbing. Healthcare costs continue to rise even though there is a concentrated effort to contain costs by payors and providers. The only effort that will be successful in decreasing the percentage of the GNP spent on healthcare is by significantly decreasing the demand for services (11). This also is proving to be increasingly difficult because of the escalating numbers of aged in the population and the availability of more advanced technology to these consumers.

Patient's costs per length of stay in hospitals has also changed dramatically. Length of stay at a hospital in the early 1980s was typically 7.6 days at an average cost of $1850.96 per hospitalization. By 1985 the average length of stay was decreased to nearly seven days, however, the cost of the hospitalization went up to $3,244.74 (Source Book 4). In the late 1980s to early 1990s there has been a shift to outpatient surgery centers which has decreased the need for many inpatient beds in hospitals. Even with this shift to less than twenty four hour hospitalizations, the average length of stay today is only down to approximately six days and the average cost per hospitalization is over $7,000. This merely indicates that patients requiring hospitalization are more acutely ill than in previous years (Hall 12).

Interestingly enough, in 1991 Booz-Allen and Hamilton completed a three year research study on how an average American's dollar is spent for healthcare. Sixteen cents went for

"medical care", fourteen cents for scheduling and coordinating that care, and twenty nine cents was spent for documentation. Nurses' documentation takes more time than is spent on care giving. Additionally, twenty cents is spent for hospital's staff idle time or waiting for something to do, eight cents for hotel type services, six cents for transporting patients from one point to another and, finally; seven cents for management and supervision (Brider 28).

Efforts to determine accurate statistics of the population's insurance status revealed data that is unreliable and difficult to interpret. In the Environmental Assessment 91/92, the U.S. Census Bureau statistics revealed that in 1988, 33.3 million Americans lacked health coverage of any kind, up from 31.1 million in 1987. These figures do not accurately reflect the numbers of true uninsured since individuals who were uninsured for a period of less than one year were not counted. One striking statistic was that fifty percent of the uninsured in 1988 had family incomes below 125 percent of the federal poverty level (18-20). Even though there is difficulty arriving at accurate statistics, there is a growing concern that as insurance premiums continue to rise, more and more Americans are unable to pay even their out-of-pocket expenses for healthcare services.

History of Medical Records

Another major area of concern is the method of documentation for healthcare services. According to an article in

the Journal of AHIMA a medical record, prior to the 1990s, was initiated for each patient who entered the healthcare system. There were, and in many instances still are, an average of 100 pages per inpatient medical record and a minimum of ten medical record forms in an outpatient record. A medium size hospital of 250-300 beds can conceivably generate one and a half to two million medical record forms annually on inpatient records and one half to one million forms for outpatient records. Hospitals are required to have immediate access to records for three to five years and may then move older records to off-site storage (64-65). The current hospital medical record includes:

* ninety five percent paper
* four percent microfiche
* one percent electronic records (Little 65).

Requirements for administration and storage of medical records have increased dramatically over the years as well as the expense of purchasing or leasing space necessary for this storage. In a local area mid-size hospital, the current in hospital storage space is 6,500 square feet. Off-site storage now covers over 5,000 square feet. Records that are not active for several years or those patients that may have died are microfilmed and stored indefinitely. The administrative expenses and space required to store this massive quantity of paper have created tremendous, unnecessary expenses. Jolane Huber, Director of Medical Records at Missouri Baptist Medical Center in St. Louis, stated that her

department alone incurs expenses as a result of storing medical records, in excess of $125,000 per year.

Expenses of storing medical records are divided into several categories. Administrative expenses include file dictation, microfilming, retrieval of old records, re-filing of old records, courier expense to and from off-site storage, chart assembly, tracking of loose record forms and filing. She also related that storage and additional administrative expenses are increasing rapidly and that these expenses could virtually be eliminated if all records were stored electronically, resulting in an annual saving of nearly $200,000.

History of the Delivery of Care

The concern for the expense of staffing a hospital and how care is delivered is still another issue. According to Patricia Brider, "Nursing has come full circle". Thirty years ago there were far fewer job descriptions to accomplish the same number of tasks (28). In a recent interview with Patricia Watson, a Navy Nurse Corps Captain, she reflected on Navy Nursing 25 years ago. According to Watson, Nursing in the late 1960s and throughout the 1970s was far different than nursing today. Nurses would complete the initial assessment and then, either collect the blood for all the necessary lab tests and perform the Electrocardiograms, or delegate these tasks to a non-professional nursing team member. When patients required respiratory treatments,

additional lab tests, or physical therapy, nurses would provide the necessary treatments or service. The use of physical therapists, respiratory therapists, phlebotomists and other ancillary service support was not available. More non-professional nursing care givers were utilized, whereas in the late 1980s and early 1990s the move was for nursing care to be provided by an all RN staff. Nursing assistants and other non-professionals were eliminated from the patient's bedside.

Studies have shown that, over the years, a typical 500 bed hospital may have as many as 500 job classes, with an average of only six employees in each class. As hospitals grew and job classifications grew with them, managers and workers became so specialized that they began to isolate themselves from other professionals. Any attempt to make changes that were in the best interest of the institution were met with resistance or viewed as in intrusion on their turf. At this point in time it was recognized that thirty to forty percent of hospitals costs were tied up in scheduling, documentation, transportation, and coordination (Hanrahan 33). What had happened was that a tremendous amount of time was being wasted as staff were sitting around waiting for something to happen. J. Philip Lathrop sums up the development of healthcare over the past 30 years. "By and large, we in the healthcare industry have made thousands and thousands of basically sound decisions. Unfortunately, they now add up to a mess that makes no sense" (17).

History of Technology

Technology over the years has convinced the providers and consumers of healthcare that one to two hours for a routine X-ray is acceptable, that a five minute EKG done by a high school graduate with two weeks orientation should take an hour for scheduling, documentation and transportation. Furthermore, technologists would not consider doing tasks outside of their specialty even though they were idle for a greater percentage of their day. Lathrop continues on with the reality of the 70s and 80s that employees are surrounded by a bureaucracy that is so far removed from actual patient care that customer satisfaction is impossible to measure (17).

History of Government and Regulatory Involvement

According to Health Policy Jargon, members of the Congress and other national leaders have agreed and rallied around the concept of healthcare reform. This is, however, the only common area of agreement that is shared. How worthwhile change can be brought about is an area of vast disagreement. Most concede that the system is so enormous and impaired by conflicting expectations that any applicable solution will be nearly impossible (21). Even if the Clinton Administration had not made healthcare reform its priority, healthcare providers and others in the industry would begin making changes on their own. The primary reason the government will have difficulty changing the current system of

delivering a more cost-effective healthcare product is the government. There are countless regulatory agencies, federal, state, local and multiple private auditors, sanctioned by the government. In the article "Cross train cautiously to assure legal, regulatory problems do not derail Patient Focused Care plans" an example of ineffective conflicting government regulation is pointed out. Some states allow hospitals to credential staff or validate their competencies under their medical staff bylaws, other states prohibit this practice. National organizations of various professional groups are allowed to validate competencies of their professionals for state licensure. However, some states do not sanction this practice (1).

Peggy Lee, the Quality Improvement manager at Missouri Baptist Medical Center, indicates that each area specific to a profession in a hospital setting has its own regulatory agency and surveyor. Surveys by each of these agencies, some federal, state and private, may cost the hospital up to $50,000 every three years. Sylvia Prokop, of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), verified that the JCAHO is a government sanctioned private surveyor designed to provide guidelines or standards of care throughout the United States. This agency ensures compliance with these standards by inspecting each hospital, or other institutions providing healthcare, every three years. Their standards of care cross over areas that are evaluated by other agencies that visit pharmacies, laboratories, psychiatric services and radiology departments, yet these other

agencies also must survey these specialty areas at a significant expense to each hospital either annually or every other year. Hospitals have little choice but to allow these surveyors to inspect as the results of these inspections determine whether the hospital will be allowed to treat Medicare patients or other Managed Care Insured.

In addition to the JCAHO, another federally regulated government agency is the Occupational Safety and Health Agency (OSHA). In an interview with Vicki Ferris, RN, the Infection Control Nurse at Missouri Baptist Medical Center, she indicated that as a result of the most recent blood borne pathogen standard implemented by OSHA within the past few years, the Medical Center incurred expenses of $60,000 for training existing staff, in order to become compliant, and an additional annual expense of $30,000 to train new staff to meet annual recertification standards. These expenses did not even take into consideration the countless thousands of dollars spent for the additional use of rubber gloves, protective gowns, masks and eyeware. These new standards are also a duplication of many of the JCAHO standards. OSHA may make unannounced inspections and fine institutions up to $10,000 per area for non-compliance. The expense of these surveys and the massive amount of dollars spent preparing for inspections can only be passed on to the consumer which further increases healthcare cost.

History of Patient's Satisfaction

In each of these historical issues, according to Charles Silberman, reimbursement, technology, finances, staffing and government regulations, the consumer's viewpoint has been disregarded. Additionally, he further pointed out that in the past providers failed to meet consumer's satisfaction. Physicians over the years have been allowed to determine patients' needs without seeking the opinion of the patient. One of the most utilized statements heard in the past related to physicians was "the doctor knows best". Assumptions in the past were that physicians knew the correct way to practice medicine based on their scientific education; they knew their patient's preferences; and they routinely made decisions for patients believing the patient would have made similar decisions given the same educational background (12). The bottom line was that patients had few rights and relied on the healthcare providers to make their decisions for them.

Necessity for Restructuring: Reimbursement

One may conclude from the above information that there is much room for improvement in the delivery of health care. Third party payors in the 1990s continue to direct the method of reimbursement for healthcare providers. The Federal Government persists by increasing the number of DRGs thereby further limiting

the reimbursement of hospitals and forcing hospitals to review their methods of doing business. Insurance companies reevaluated their method of payment for services delivered and sought to pattern their reimbursement on the Federal Government's DRG system. The term "Managed Care" gained recognition. According to Health Policy Jargon, managed care emphasizes that patients first contact their primary care physician who acts as the gatekeeper. The role of the gatekeeper, typically but not restricted to a primary care physician, is to determine whether he/she is capable of providing the necessary care and, if not, referring the patient to an appropriate specialist. It is expected that costs of healthcare will be significantly reduced by limiting access to specialists and more expensive therapies (23). In the article "Decoding Health Policy Jargon" it is noted that only about fifteen percent of the medical students are choosing to be primary care physicians, as compared to thirty years ago when nearly half the physicians in the US were in primary care practices (21).

Necessity for Restructuring to Include Consumer Education

Consumer demands have also dictated the need for change in the way healthcare is delivered. Consumers in today's market are far more educated and have higher expectations for personalized, quality-based clinical care. As a result, Jim O'Malley,

in a recent article entitled "Redesigning Roles for Patient-Centered Care," said that patients are more consumer-oriented and are highly selective in their care options. Therefore, to remain competitively viable, O'Malley states that hospitals are aggressively developing services to exceed patients' expectations for personalized, sensitive care (30-34). Hospitals are becoming more interested in hearing what consumers have to say and are seeking their input through consumer surveys, focus groups and questionnaires. According to Roberta Messner, patient's comments regarding dissatisfaction with services were not related to competence or even the quality of care. The problem was their perception of insensitivity to their needs or the lack of respect for their opinion. It can be stated with reasonable certainty that healthcare providers take pride in delivering "quality care." What has not been considered is that the consumers perception of quality often times differs (38).

Necessity for Restructuring: Computerized Patient Record

Despite the mounting evidence that the existing system of documentation is becoming obsolete, healthcare providers may not have a voice in changing this method of documentation. In "Toward an Electronic Patient Record" it was stated that in June of 1992, the Department of Health and Human Services (DHHS) announced the introduction of the "Medical and Health Insurance

Information Reform Act of 1992." A time table was drafted to develop standards and guidelines for confidentiality, which empowered the Secretary of the DHHS to mandate standards if a consensus in the subcommittees was not met. A fast track toward computerization was directed as well as a mandate that all providers participating in Medicare programs have a computerized patient record system by January 1, 1996 (1). According to an article in Medical Records Institute, the federal government is currently developing strategies to legislate computerization and patient identification in relationship to insurance reform and the introduction of a system that provides healthcare for all. Few hospitals throughout the US have adopted as aggressive an approach as the federal government requires and believe the time line set by the government is unrealistic. HCFA has estimated that approximately $80 billion will be necessary to implement computerized records which translates into between one and two per cent of every healthcare providers' annual operating costs over an eight year period. HCFA further states that providers should not expect the federal government to provide any financial assistance to fund these capital expenses (5).

Necessity for Restructuring: Technology

Technology, in the early decade of the 1990s, has rapidly advanced in areas other than information systems. Hospitals are

no longer able to purchase equipment and expect reimbursement in total from the federal government. As a result, hospitals must determine what market they can best serve rather than attempt to be all for all. Providers now look at ways that large capital expenses can be shared by others, even if institutions that share expenses are in direct competition with each other.

Necessity for Restructuring: Staffing Issues

Finally, salaries in hospitals reached the all time high of greater than fifty percent of operating expenses. The reason for this growth in salaries is that more professionals have been added to various departments within the hospital, and technicians and assistants have been eliminated. By the 1990s a local area hospital had changed its method of delivering nursing care from a team of Registered Nurses, Licensed Practical Nurses and Nursing Assistants to an all RN staff. This was called "Primary Care Nursing" and it was believed that this would provide a better quality of care for the patients. Phyllis Watson, et al., pointed out that this concept led other professional groups to develop their own specialized and fragmented organizations within the hospital setting. Continuity of care was compromised and duplicate work steps were created, which further compounded the escalating costs of healthcare (45-52).

At this point there were no patient satisfaction surveys to determine whether departments staffed with all professionals,

including the nursing units that adopted the primary care nursing concept, was a necessary move and, after the fact, the question arose as to whether the quality of care was indeed improved. An independent study at Missouri Baptist Medical Center in Saint Louis was initiated by the Director of Nursing to determine the effects on quality and costs of care using the "Team Nursing" approach rather than the "Primary Care Nursing" concept. A task force was appointed to investigate options for delivering quality care as well as reducing costs. The task force was made up of nurse managers on the sixth floor medical-surgical unit and several nursing staff members. Team nursing was re-implemented as a test on this single nursing unit and costs were significantly reduced as evidenced by the units monthly financial statements during the last quarter of 1989. Members of the team, or the skill mix, were settled by determining which patient care tasks must be performed by an RN, based on the Nurse Practice Act. Once this was determined, a calculation was performed to determine the percentage of patient care tasks, based on the total tasks, that RNs must perform. It was determined that sixty eight percent of all patient care tasks must be performed by an RN and thirty two percent could be performed by an LPN or Nursing Assistant. Using these percentages, the task force developed a staffing tool to determine the staffing needs for each shift on each wing. Based on several months of patient satisfaction surveys developed within the Medical Center, quality of care was not compromised. The study, the staffing tool along with quarterly staffing patterns, the unit

financial statements and the patient satisfaction survey results were presented to the Medical Centers Quality Council for comment. With these overwhelmingly positive results, the decision of the Council was to reinstitute the Team Nursing Concept (Quality Council Minutes).

Team nursing versus primary nursing was just one of the issues that began to surface. Defining who the customer was and what their expectations were became an issue of more importance. None of this was meaningful as long as society was willing to ignore the need to bring healthcare under control.

Conclusion

Until recently, an immediate challenge to change has not been necessary. The competitiveness of the delivery system is just now becoming evident because of an abundance of unused hospital beds. This in part can be attributed to a shift in inpatient versus outpatient care and advanced technology. Institutions who will survive the future must redesign their service so that the highest quality of care can be delivered in the most cost-efficient manner, yet still meet the expectations of the consumer. John Byrne stated that consulting firms are now raking in tens of millions of dollars in revenues by advising companies to organize their operations through an understanding of the market and the customers it wishes to reach. In order to do this he believes a complete analysis of what it will take to win the market

share is critical (78-79). This is not about doing more with less, but about doing things differently, redefining clinical and service delivery outcomes, enhancing quality through improvements, with the end result being improved customer satisfaction. This effort, according to O'Malley, will result in differing roles for providers and non-providers of care within the healthcare delivery system. The goal of these new roles will be an attempt to bridge the gap between balancing customer expectations and perceptions (31).

As the article in JONA points out, providing exceptional personalized service will be the key to being the leader in the healthcare marketplace. Creative leadership is critical in order to operationalize the vision of customer-oriented care. Roles and systems have to be redesigned in order to better support nursing and move the organizations to a new level of providing patient-focused care (34). Therefore, the purpose of this study is to support the notion that: 1. service redesign 2. restructuring and 3. customer focused care are critical to the success of the institutions that wish to survive the whitewater rapids of health care reform.

Chapter II

LITERATURE REVIEW

Groundwork For Change

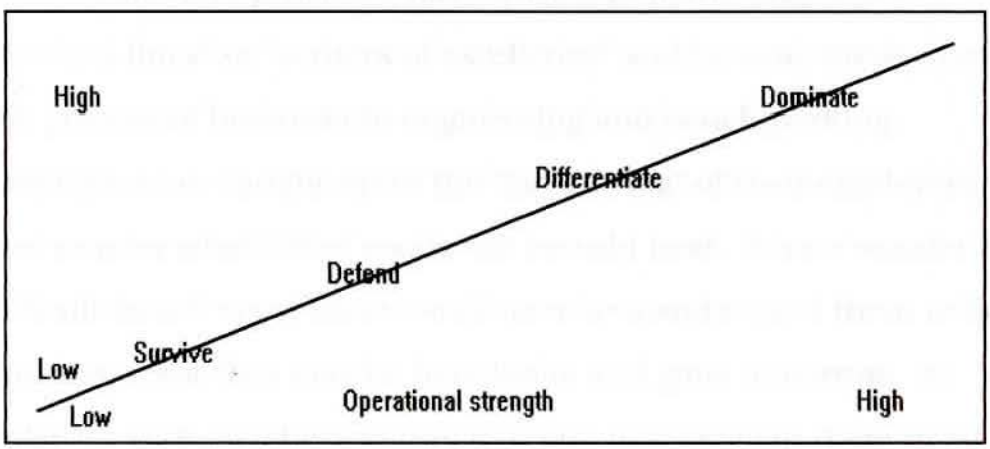
Many healthcare organizations have the desire to create the changes necessary to decrease their costs per unit of activity. In order to do this, decisions have to be made to implement the kind of changes in service, without significantly compromising quality, that are necessary to create these new customer-driven or patient focused organizations. Saad Allawi points out in "Are you ready for a structural change?", that changes feasible for one hospital may end up creating a total disaster in another facility. In order to initiate the steps necessary to implement structural change each hospital must face unique obstacles and forecast the outcomes prior to executing their decisions. Allawi continues by suggesting that considerations need to be made in four key areas prior to making the decision to modify the existing system. Initially, a determination must be made on the magnitude of the return that is required. The second area to consider is the speed with which the organization is able to move. Thirdly, the organization needs to determine the capital that is available to make the changes that are necessary to make the intended return. Lastly, the strength of the operating and management capabilities of the staff are critical for the success of the plan (39).

An article within the Healthcare Forum Journal indicates that a common tool for decision making is utilized by hospitals. This tool, which is referred to as The Continuum of Operational and Organizational Readiness, is used to assist a facility in assessing both their current position and their options for future development. Four stages of operational and organizational development are identified (Figure 1). The purpose of the continuum is to indicate, within each stage, an increase in the organization's skills, abilities and effectiveness. This is measured by reduced operating costs, improved customer service and significantly improved clinical outcomes. The first stage is identified as survival. Hospitals that may identify with this stage are losing money and need change but lack the necessary resources or management capability to implement change. Stage two is the defense stage. Hospitals that may be identified in this stage have an acceptable bottom line but a future that will decline unless a rapid response to the competitive market and increasing cost pressures are implemented. Generally hospital's executives in this position feel they are doing well enough for now and frequently do not implement contingencies necessary to prepare their facilities for the rapidly changing market. Stage three is referred to as the differentiation stage. Few hospitals can claim membership in this stage. These hospitals are generally profitable and market leaders in specific product lines. A concern that faces executives with hospitals in stage three is their ability to redesign operations to meet the ever changing customer's expectations. Their objective is

to achieve best-practice standards in service, quality and cost. The last stage within the Continuum of Operational and Organizational Readiness is domination. At this point in time no hospital has been identified in this stage. A hospital that would claim this stage of operational expertise would not have a need to change but has an almost limitless capacity to do so. Changes would be based totally on customer and competitive needs (40-41).

Figure 1

Continuum of Operational and Organizational Development



SOURCE: Healthcare Forum Journal. Exhibit from "Are You Ready for Structural Change?" by Saad Allawi, David Bellaire and Lisa David (1991).

Hospitals may be in one stage or have characteristics that may place them in between stages. In order to move from one

stage toward another, recognized strengths and known limitations must be balanced. Changes of any magnitude must be approached with the understanding that successes will not be recognized over night. The institution must develop a definitive strategic plan and create a culture that supports ongoing change. The culture that develops will be a group that is willing to "let go" of conventional and often times inherited standards (42).

Health care is no different than any other industry. An overabundance of consultants are willing to introduce a solution to any level of management that is willing to listen. Over the past few years healthcare providers have turned to marketing to sell "product lines" or "centers of excellence" and became involved in the process of business re-engineering and benchmarking. Employees are caught up in the "fad surfing" of their employers and wonder what bill of goods will be sold next. It's no wonder it is difficult to sell new ideas to staff members and expect them to buy into a concept that may be here today and gone tomorrow. In order for staff members to buy into any new concept there must be convincing evidence that there is a clear vision of the future and a legitimate, well communicated plan to get there.

J. Daniel Beckham believes that the management concepts that are having the best impact on healthcare organizations are strategic thinking, customer focus, quality improvement, re-engineering and benchmarking. He points out that strategic thinking identifies change as inevitable, rapidly occurring and intensifying at an unpredictable rate. In order for an institution to

respond to these characteristics there must be a commitment to being flexible, responsive and an ability to adapt to change at all levels. Decisions must be made on the leading edge. The strategic planners must have a clear understanding of their customers expectations and their competitor's business. Focusing on the customer is a new notion for healthcare providers. Customer needs and expectations become the center of an organization's purpose (78). Ted Leavitt as quoted in the Healthcare Forum Journal says, "The purpose of a business is to create and keep a customer" (80). The purpose of businesses, including healthcare providers, is to give customers the best possible deal, generate a respectable profit and continue this process while keeping up with the changes in the environment.

Beckham continues on with the management concept of Quality Improvement. In theory, organizations must make daily improvements to meet the needs of their customers and the market place. Quality Improvement is designed to be a long term commitment to continuously improve (80). In order for quality improvement to work employees, managers and executives must be working the same plan. Susan Shackelford indicates that one of the reasons for failure in quality improvement programs is that employees suggestions have been ignored by their managers and shunned by peers. Employees at all levels must be comfortable in reporting quality issues to managers and executives (74).

Re-engineering is a process that starts from the future and works backwards. In doing so, all pre-existing ideas and methods

of doing business are eliminated. The end result should be a business that significantly improves rapidity of response to the market, productivity and profitability. Re-engineering and quality improvement both focus on processes. Mike Hamer, the guru of re-engineering, indicates that this exercise involves (1) rethinking fundamentals and (2) radical redesign (3) of business processes (4) to achieve dramatic improvements.

The final management concept that Beckham refers to is benchmarking. Benchmarking is a diligent process of comparing products, services or practices of one company with the competition. The question that might be asked is, what is our competitor doing to deliver a better product or service than we do? The most important key to this question is, which processes are most important to improve? Benchmarking is a tool for assessing and often times duplicating the competitor to gain an advantage. The solution, however, is temporary since competitors are also in the process of benchmarking. Benchmarking should lead to being the best practice within any given industry (81).

The above management concepts may be applied to developing an integrated management model within the boundaries of an integrated healthcare delivery system. Key steps to the development of an integrated management philosophy, according to Beckham, are management education, focusing on defined priorities, developing a common language and positioning the model as evolving rather than static. He continues by commenting that without these key steps, organizations will be divided by their

own language and their own set of rules. The need for fluidity creates an atmosphere of flexibility and the ability to blend organizational thinking (82).

Since the origin of Total Quality Management or TQM, medical centers and hospitals have been evaluating the way that business was being done. Employees are given the opportunity, or empowered, to participate in the evaluation of processes and provide valuable input into the decision making process. These collaborative decisions, often difficult but necessary, became critical to the operational and financial future of not only the hospital but the employees. Many of these decisions and changes that followed resulted in either a restructuring of the facility or a redesigning of the processes. The cover story of Business Week summed up restructuring or redesigning by stating, "Forget the pyramid, smash the hierarchy, break the company into its key processes, and create teams from different departments to run them" (76-77).

Medical centers and hospitals have recognized the need to restructure, reorganize or downsize. Regardless of the label, eliminating layers of management and empowering employees with increased responsibilities has to be the goal. Managers and employees continue to have loyalty and commitment to their own territories rather than a commitment to facility goals. The solution to this misdirected loyalty and commitment, according to Business Week, is the horizontal corporation. A horizontal corporation eliminates both hierarchy and functional or

departmental territories (76-77). Self managing teams empowered to base their goals on customer satisfaction will be the future success of medical centers and hospitals. Processes have to be changed, unnecessary work must be eliminated, productivity enhanced and customer satisfaction dramatically increased. Self managing teams also result in a cultural transformation.

Once organizations have made the necessary organizational changes in order to succeed in the future of healthcare delivery, decisions will need to be made as to what areas may require restructuring. William Leander believes that choosing the right area to be redesigned is as important as how it will be redesigned. This decision should be based on objective criteria that fall within the hospitals strategic plan (16).

Healthcare Consumer's Expectations

In the article "Keeping An Eye On Time," it is noted that time and a solid medical knowledge base is what physicians have to sell. Physicians that mismanage their time suffer the consequences in their annual income and lifestyles. In the hospitals where labor is the majority of the expense one would expect that time managed properly would leverage expense reductions. The consumer is determining their satisfaction on how their time is valued in a healthcare setting. In nearly every other industry time management has become a priority and measures have been taken to optimize the use of time. In healthcare, however, consumers

continue to communicate their dissatisfaction on response time in healthcare (62-63). J. Daniel Beckham points out in this article that more people are accepting the notion that as quality increases, costs decrease and when speed and quality are approached together, cost reduction is enhanced. Beckham further explains the rationale for speed. Consumers base their satisfaction not only on cost but also on the speed of delivery for service. Streamlined processes require fewer people that need to come in contact with the consumer. Fewer needs to pass work on to another individual, proven by cross-training staff, decreases the possibility of error (64-65). Doris Lichtenstein, the Director of Risk Management at Missouri Baptist Medical Center, points out that even a simple error discovered by the "right individual" can result in an out of court settlement of up to $50,000. As consumers continue to question the contribution of every activity and what value it has to them, organizations are having to drive out non-value-added work. The more efficient an organization becomes the more likely it is to be a higher-quality organization as well as more cost efficient. Consumers, according to Beckham, are looking to healthcare providers with a critical eye as to how rapidly they respond to a problem and if they adequately resolve the problem (65).

Physicians are considered to be major customers of hospitals and medical centers. Patients are generally directed to a facility of the physician's preference as long as the facility accepts the patient's insurance plan. Physicians that are unhappy with the

care or services provided have the option of moving their practice to another facility. On the other hand, if physicians are involved in the decision making process of any new change project, especially one that involves the care of their patients, the success of the implementation is significantly enhanced. A visit to any medical center's physician lounge or dining room would rapidly identify the climate or attitudes that physicians have toward that medical center. Physicians do not react well to change unless they believe in the need to change. In the article "With Right Approach, Hospitals Can Turn Skeptical Physicians Into Patient-Focused Care Champions," it is suggested that physicians are driven by data. Data from hospitals that have implemented patient-focused care should be presented. It was even recommended that key physicians, preferably not hospital employed physicians, participate in site visits to other facilities. Soliciting their input for solutions to problems and being open and honest about the potential challenges further enhances the success of any program change (21-24).

Dawn Holh points out in a recent article, "Turning Complaints Into Compliments," that only about four percent of dissatisfied patients actually complain. The remaining ninety six percent never give the business a second chance to resolve the problem. Patients generally conduct quality control by comparing their expectations to their experience. She continues by pointing out that the majority of patients who do complain will return to the service provider if the complaint is resolved to their satisfaction

and that the complainers are more apt to return than those dissatisfied patients that never complained (26-27). Leonard Berry, in the article "Blessed Assurance," discusses the fact that "While empathy, confidence, and responsiveness are key factors, the most important attribute to customers is reliability. The quickest path to customers' ire is when a service provider makes or implies a promise which is not kept" (8). In the article "Customer Candor" it is offered that customers do not expect us to be perfect, they just expect us to show that we care. When we demonstrate caring, customers in turn care by offering suggestions for improvement. Generally it is believed that patients do not know how to register complaints, believe it would not do any good to complain or fear some retaliation might be brought against either themselves or their family members. Facilities that directly ask for feedback and have a mechanism in place to provide formal feedback will have more long term loyal consumers of their service (8). Chip Bell states, "The healthy customer relationship, like the healthy marriage, is one marked by candor and welcomed critique. Honesty begets more honesty if defensiveness is absent" (8).

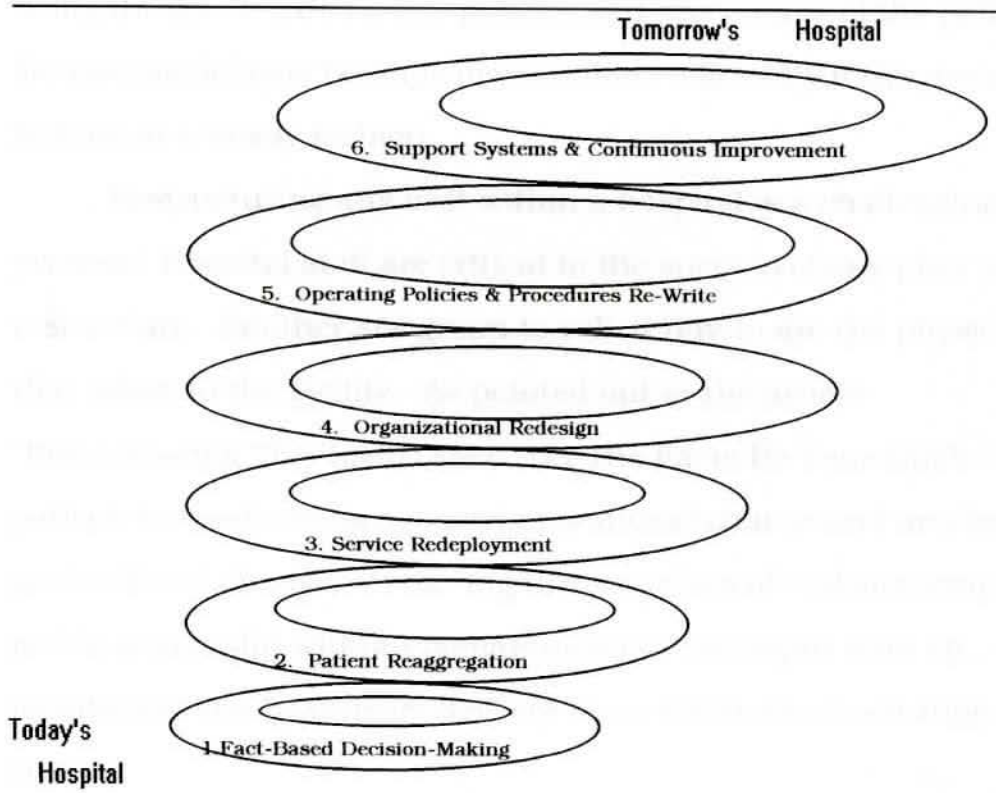
Beginning The Process/Definition Of Patient-Focused Care

Patient-focused care, as described by Hospitals magazine and ServiceMaster Company, is "the redesign of patient care so that hospital resources and personnel are organized around patients rather than around various specialized departments" (Bissen 4).

A tool, developed by the Patient-Focused Care Association, called the "Concentric Rings of Restructuring" indicates that the most important step is "fact-based decision making" (Figure 2).

Figure 2

The Patient-Focused Care Associations
Concentric Rings of Restructuring



SOURCE: Patient-Focused Care Association, Marietta Georgia. Exhibit from"Restructuring the 'Right' Area: Let the Facts be Your Guide," by William J. Leander (1993).

It is important to begin with units that play the most important role in not only the present overall performance of the hospital but also those units that are strategic to the future of the hospital and increased market gain. Tailoring the project to meet the needs of the hospital is important but Leander emphasizes that "quicker is better" (16-17). The rationale for a faster implementation is that departments have less time to dangle in the traditional way of doing things. Furthermore, policies and procedures of the patient-focused model may be implemented more efficiently if the process is done in a timely fashion.

Restructuring any unit within a hospital is a challenging process. Hospital staff are critical to the success of any plan to restructure. Another key group to solicit buy-in are the physicians that admit to the facility. As pointed out in the article "Restructuring The 'Right' Area: Let The Facts Be Your Guide", patient-focused care is one part operational change and another part cultural change. Achieving the objectives of restructuring will not be successful without communication and input from all members of the healthcare delivery team within the institution (16).

A local area hospital provided a great example of selecting an area that has a great deal of effect on the bottom line and significantly affected customer satisfaction. The Admitting Department is often an area of frequent complaint by patients, families, physicians and other hospital departments. In the past a

normal reaction to a single department having so many complaints would be to be critical of the manager in charge of the department. In an interview with Isabell Arndt, manager of the Admitting Department at Missouri Baptist Medical Center, Arndt explained that the existing admitting process was very complex, crossing various departmental lines, and that there were several possible causes for delays. The Admitting Department reviewed the process with all the departments involved and, as a result of these evaluations, several changes were implemented to streamline the process. She also indicated that the final implementation of the new process took place on July 1, 1994. The exciting results proved the success of the new process. The goals were to decrease the admitting process from approximately forty five minutes to two to three minutes, and to decrease the number of patient and physician complaints by ninety percent within three months. "This is a result of Total Quality Management and a total commitment of all department managers and their employees to evaluate and improve the process," Arndt stated. In a more recent conversation with Arndt, the new process continues to be successful and that complaints have decreased in excess of ninety percent. This process improvement is expected to further develop into a total restructuring of this department for a more customer friendly service.

Developing a customer focused service is a relatively new evolution within the healthcare delivery system. According to Arndt, another process team has been developed to determine

whether the Admitting Department is even a necessity. She believes that with data collected from all the process teams throughout the Medical Center, this service may be able to be eliminated. The duties of the existing admitting clerks could be expanded to involve the duties of other employees, resulting in a further streamlining of the process thereby decreasing the number of staff members that patients and families would need to interact with. Self managing teams empowered to base their goals on customer satisfaction was the primary reason for the success in the Admitting Department at Missouri Baptist Medical Center. The process was changed, unnecessary work was eliminated, productivity overall was enhanced and customer satisfaction dramatically increased. Self managing teams result in a cultural transformation.

One of the anticipated results of restructuring the process of delivering care is to reduce costs. Although, cost savings should not be the primary reason for redesign. Many institutions believe that changing the mindset of "business as usual" will secure the future of their facility, thereby creating a benefit or savings. As hospitals explore ways to redesign their processes, frequently the choice is to eliminate as many positions as possible by "cross training" employees to perform multiple tasks. In the article "Cross-Train Cautiously To Assure Legal, Regulatory Problems Do Not Derail PFC Plans," it is pointed out that effective use of cross-training can ensure the successful transformation from the "way we have always done it" to the new paradigm of patient-focused

care. Lack of research into the licensure and liability issues will cause unforeseen pitfalls. State and federal licensure as well as countless other complications have evolved over time as a result of the battles over turf. Many professional organizations have created legal entanglements to protect themselves. Unfortunately these laws are inconsistent from state to state so cross-training certain professionals may cause concerns depending on which state one is located. The primary purpose of these laws were to protect individuals from unqualified and dishonest practitioners, however, now it has provided a dilemma (1).

A medical center in Fort Meyers, Florida, devised a chart which carefully outlined which activities required a license to perform, who may perform the task under their interpretation of the patient focused concept and who performed the tasks under the old paradigm. John Skalko, assistant vice president for operations improvement at this medical center, summarizes in the September 1993 article of Patient-Focused Care that "this chart offers a matrix of opportunities for multi-skilling, depending upon the complexity of the skill, the frequency with which it is required, regulatory limitations, and the supply and demand of the skill in each patient setting." The complexity of the skill may determine whether the task is worth spending the time to cross-train. Skills that require less than four weeks of training may be worthwhile; however, a skill that requires four to six weeks of training may be cost prohibitive (2).

Veterans in Patient-Focused Care generally start off on the path of least resistance. This is generally a group of staff that already has multiple skills. As pointed out previously, many professional groups have similar training such as physical therapists and occupational therapists and have spent years battling over their similarities as well as their differences. The Fall 1993 issue of Patient-Focused Care further points out other issues which should be considered. These are:

1. The frequency that the task is required
2. The ability to couple skills that eliminate duplicity
3. The multidimensional nature of tasks required for a particular procedure - for example, the individual performing an ECG must be able to determine if the machine is functioning properly and whether the reading is of the quality for the cardiologists to interpret
4. The possibility of dividing training into two skill levels: those skills applicable to any unit; and skills specific to specialty units (3)

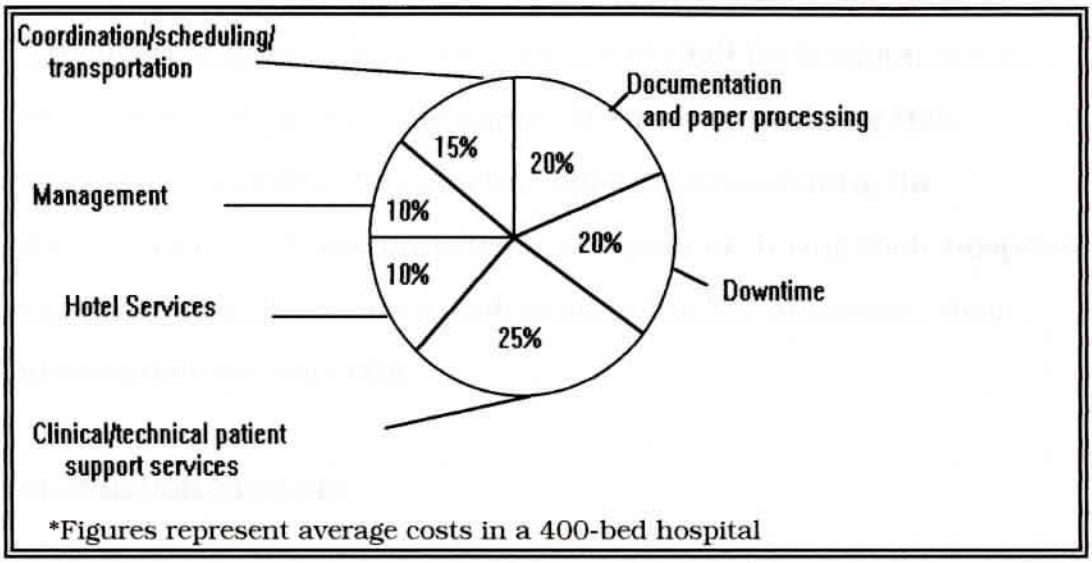
Once the care givers have been identified and the necessary educational process has been completed, a method of determining and periodically verifying competency must be implemented. A requirement of the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) is that competency must be validated annually for each healthcare provider (398).

One of the rationales for developing patient-focused care in a hospital is to decrease the number of staff members with which a

patient should have to interact. Two values should be recognized as a result of decreasing the number of staff members with whom patients need to come in contact. The first is the concept of continuity of care and the second a dramatic savings. Janet Henderson and James Williams claim that fixed costs alone should decrease between fifteen to twenty five percent (Figure 3). The rationale for the savings is based on several assumptions. One is that the staff involved in patient care and most of the support personnel will be relocated from their traditional departments onto redesigned units that will be much larger. This larger, redesigned unit's patient care delivery team would most likely provide services such as physical and occupational therapy, ECGs, simple laboratory tests, basic respiratory treatments, radiological exams, admitting functions, transcription and discharge planning. The cross-trained staff would be capable of providing all of these services in a more concentrated or patient-focused location. Those more complex or highly specialized treatments that require more expertise from professional staff would be in a centralized location. As a result of the majority of the care being provided at the patient's bedside, much less time will be spent coordinating care, scheduling work and transporting patients thereby decreasing expenses. In most cases the care of patients is coordinated by a professional nurse allowing Licensed Practical Nurses and other patient care providers to accomplish necessary tasks. Families will be accommodated and be expected to participate in the care of their family member.

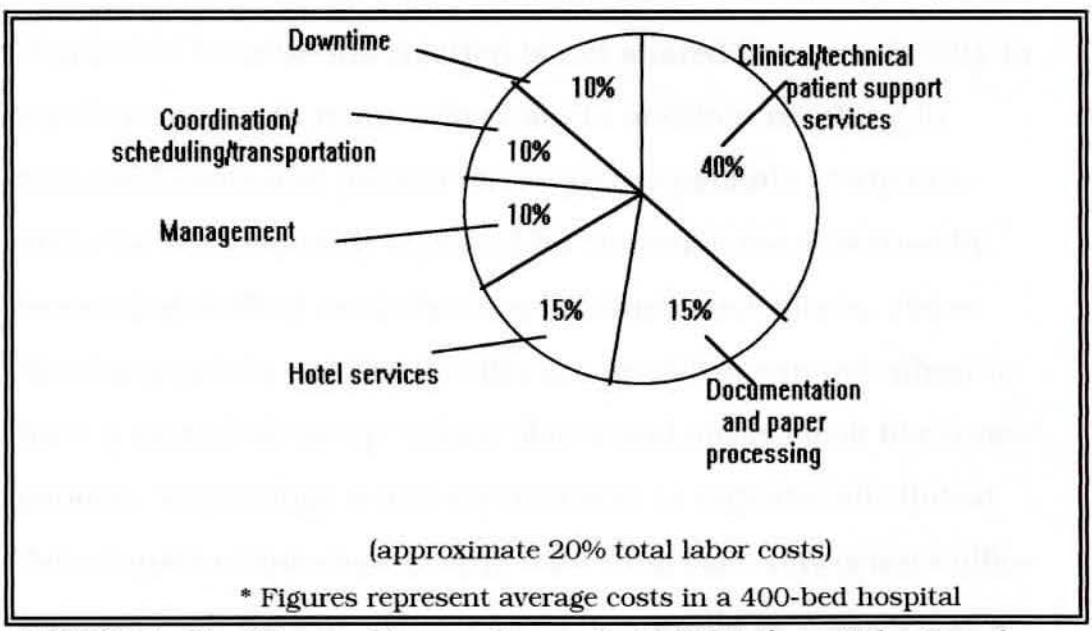
Figure 3

Hospital Labor Costs (Today)



*Figures represent average costs in a 400-bed hospital

Hospital Labor Costs (Future)



(approximate 20% total labor costs)

* Figures represent average costs in a 400-bed hospital

SOURCE: Healthcare Forum Journal. Exhibit from "The People Side of Patient Care Redesign," by Janet L. Henderson and James B. Williams (1991).

Medical-surgical nursing units will take on the look of the existing maternity units.

Patients in this process will be admitted and discharged directly from the nursing unit. Ideally the bill for hospital services will be resolved prior to discharge. In order to facilitate this process of providing the complete bill and streamlining the documentation of care provided to the patient during their hospital experience, medical centers will need to further automate their information systems (48).

Information Systems

Information systems currently utilized within the healthcare delivery system are archaic to say the least. Laboratory tests are duplicated because information is not shared from one facility to another or even from one physician to another, resulting in increased costs and inconvenience to the patients. Patient's histories are frequently repeated for the same reasons thereby increasing staffing needs because of duplicated efforts. John Morrissey points out that healthcare providers can not afford to have a patient show up in four places and always look like a new patient. Technology is already available to organize all clinical data, inpatient information and data from each physician's office visit, for each patient. This information would be collected at a centralized hub, organized and then a computerized record would be built for each patient. All information would be current and

comprehensive which would enhance the management of each patient's case. The reason that this technology is not utilized stems around the inability to break down the barriers of self-contained clinical departments. In the average medical center there are multiple information systems being utilized. Examples of these systems are pharmacy, laboratory, radiology, patient accounts, nursing, patient supplies, operating room and multiple systems for individual department scheduling. Each one of these systems, though very sophisticated, cannot communicate with each other. As a result, as long as departments are set up to operate independently, integrated systems can not integrate clinically (39).

Executives in the healthcare industry are realizing that the payers are no longer willing to tolerate repetition. As hospitals continue to merge with other hospitals and form large systems the need for a centralized data base is further emphasized. This project should also be part of the strategic plan for hospitals and hospital systems. Restructuring the information system without restructuring the delivery of care or visa versa will not work. Sharp Healthcare, a San Diego based system, consists of five acute-care hospitals, fifteen clinics, seven specialty facilities and 2,200 affiliated physicians. Their plan, according to Morrissey, was to select one vendor that would supply them with all the components necessary for an integrated information system. The cost of this new system would be twenty-five million dollars over a five year period. It was determined that servicing the existing incompatible

system would require twenty million dollars over the next five years just to keep it running. Additional staff would be necessary to maintain the existing system since there were multiple systems and experts were needed for each system. By developing a new integrated system, it was believed that fewer full time equivalents (FTEs) would be necessary. Without this new system they were unable to determine actual costs for delivering care which would be critical to their future. The Sharp Healthcare system determined that it would be more difficult to develop their patient-focused care units without implementing an information system to support the concept. The decision was made to invest in the new system (46-47).

Johns Hopkins Hospital and the Johns Hopkins University School of Medicine are committed to creating the ideal patient experience by reducing time patients spend dealing with situations or delays, and increasing the time that caregivers spend with these patients. They attribute the success of their commitment to an integrated information system. Jodi Melbin believes that healthcare costs and improvements in the delivery of patient care can be directly tied to the right information system. The success at Johns Hopkins Hospital was the result of educating and training the staff and redesigning the work process as well as the delivery of care. Although their system was a hospital wide system, each department was able to build in their special requirements. Patient-focused units had different needs than other nursing units. Laboratory, pharmacy and radiology had special requirements but

all data was able to be accessed to eliminate duplication of information. The hospital rolled out the complete project throughout the entire hospital. Although they feel the project was totally successful, the information system staff felt that they should have used a pilot area and worked out all the bugs prior to adding additional units (4-7).

Mercy Hospital and Medical Center in San Diego, California, was one of the first patient-focused redesign initiatives in the country, according to Cassandra Bissen. Their Creative Actions Reflecting Excellence 2000 program (CARE 2000) was designed to radically change how traditional healthcare was delivered. Their patient care delivery structure for the patient-focused care units was similar to the case study hospitals previously described. Where they differed was in the development of the information and record keeping system. The expectations of their information system for the delivery of patient-focused care was to provide:

* Integrated patient information from a variety of clinical services
* Interpretive, diagnostic, and decision-making capabilities
* Links between cost of care, interventions, and outcomes (quality efforts)
* Treatment protocols
* Links between care deliverers and administrators
* Continuity of care -- from birth to nursing home and across different sites
* Integrated resource scheduling

* Charting by exception
* Patient education
* Problem list

Additionally, Bissen points out, it was required that all this information would be available at patient's bedside computers. The motto of the information systems staff at Mercy Hospital and Medical Center was, "You cannot discover new oceans unless you have the courage to lose sight of the shore" (4-6).

Mike Billings attended the annual Healthcare Information and Management Systems Society meeting and summarized that "hospital information systems must be thought of as knowledge enhancers and process enablers rather than sources of static data or back-end number crunching machines." It was determined as a result of this conference that the medical record of the middle 1990s should be able to:

* Grapple with an immense quantity of clinical data and have a uniform shared set of data
* Be understandable, user friendly, with easy access to information and flexibility to configure data in meaningful ways
* Orchestrate and support the vast resources and staff as well as timely access
* Allow the best care to be delivered to each patient every time as well as use data in decision making

The best way to determine whether the system is meeting the needs expected is in the attitude of the customer. Physicians, staff and patients will support and utilize a system that meets their needs. Information system staff need to be aware of the customers or end users needs and continuously verify their satisfaction (8-9).

Roy Simpson comments in the article "Hospital Redesign Demands 'Open' Information Systems," that patient-focused care will be nothing more than a lot of pain without any gain unless hospital's information systems also are redesigned in the process. He substantiates that hospitals will save twenty to thirty percent in salary expenses if patient-focused units are established properly. Simpson continues that hospitals will need bedside computing capabilities with optical bar code readers to scan medications and supplies so that charges will be recognized in the appropriate department. Two areas of concern remain with existing technology and data base information. The first is that there is no professional consensus on a nursing minimum data set which will exclude nursing knowledge from any of the new redesigned systems. Secondly, as long as the government and other regulatory agencies continue to demand data be reported as they have in the past there will be a need for a dual reporting system. Simpson believes that until reimbursement and reporting mechanisms change, the patient-focused care models will never reach their full potential (32-33).

CEOs/Executive Challenges and Solutions

Jeffrey Green cautions CEOs that restructuring the work-force, depending on the process and its implementation, may lead to eliminating their own job. E.C. Murphy Ltd. conducted a study of over 300 organizations of which 117 of these were hospitals. Forty eight per cent of the CEOs, within the 300 organizations studied that implemented across-the-board job cuts, were unemployed within eighteen to twenty four months. Of the facilities studied, work processes of all employees, regardless of their job description, were evaluated and compared with national data that identified "best practices". The results showed that:

* ninety percent of the organizations maintained cost savings from job cuts for the previous year
* seventy percent cut an additional three to eight percent from operating costs
* eighty percent of the hospitals studied reported improvement in the assessment of quality by patients and physicians
* seventy percent said their employees' perceptions improved

The study further pointed out that simply cutting jobs across-the-board offered only short-term savings. The backlash of cutting jobs was unions and disgruntled employees fighting back and challenging the judgment of upper level management. The majority

of institutions experiencing negative results, realized that the reaction was a consequence of their process of implementing this new concept. Executives that implemented changes as a result of recommendations from heavy handed outside consultants had the most challenges from their employees (4).

A recipe for success was provided by the Magellan Management group in the journal of Hospitals and Health Networks. This recipe includes ten essentials that make projects that involve change a success. 1. CEOs must be committed to the process of change. 2. Expectations must be clear, management supported and within a realistic time frame. 3. Leaders must build trust and the values of the organization must be reaffirmed. 4. Board members, all management levels, employees and other stakeholders must be educated about the need for change and be given some time to accept the fact that change is necessary. 5. Management roles need revision with the organization on the side of the executive level prior to the process of rebuilding. 6. Physicians should never be surprised or kept from participating in the process. Soliciting their input and communicating the benefits of change simplifies the change process. 7. All members that participate in the change process must be held accountable for the results. 8. Setting benchmarks are critical at the beginning of the process. This requires an analysis of not only the local competitor but data from regional and national surveys. 9. A redesign of the infrastructure may be necessary to insure that

decision making is supported rather than criticized if the outcome is not positive. 10. Performance of the processes must be reviewed periodically and rewards appropriate to the accomplishments must be recognized. (23).

As pointed out in the article, any change project must be thoroughly evaluated as it relates to the institution's mission, quality, service delivery, safety and cost, prior to committing to the change. Sharon Tanner, Chief Operating Officer of St. Mary's Hospital, in Richmond, Virginia, pointed out that many executives will attend a conference to see what's going on in the market place and frequently return home deciding to give a particular philosophy a try. She states, "Those who fire without aiming have a good chance of shooting blanks". She continued to comment, "We recognize that what served us well in 1994, may not in 1995" (23).

In the article "Managing Chaos," CEOs of many medical centers have varying opinions of the process that they either have gone through or will go through. The CEO of a medical center in Beaver, Pennsylvania resigned his job revealing that burn out was caused by reengineering, patient-focused care and critical pathways. He stated that "Changes are cumulative, more like a back injury. The more you do, the more burned out you get. Not just as a person but as an organization." Others view this necessary process of change as an exciting rocky ride or an opportunity to ride thrilling whitewater rapids (22).

Healthcare providers recognize the need to reshape their business or become leaner just as other major industries have done. Healthcare is changing so rapidly that executives that used to evaluate their strategic plans every three to five years are now doing so quarterly. As many as a hundred changes may be taking place within any one institution at any given time and therefore must be orchestrated in a manner that would create the most success.

David Weber discusses in the article, "Six Models of Patient-Focused Care", scenarios that were reviewed at a conference entitled, "Patient-Focused Healthcare Delivery: An Executive Conference on Restructuring". CEOs and other executives attending the conference came from over 116 organizations and represented the United States, Canada and England. The general consensus of those in attendance that had already begun change projects and the advice given to those that were about to begin projects was, be prepared to take lots of heat, spend money and encounter resistance from multiple directions. Status quo, they agreed, would be their doom and the demise of their institutions. The key note address at this conference was summed up by pointing out that the functional fragmentation, compartmentalization and centralization within today's hospitals have created a business whereby providing the care is only twenty per cent and the rest is infrastructure. J. Philip Lathrop, the vice president of healthcare practice at Booz-Allen and Hamilton, points out that hospitals consider themselves capital-intensive when in

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fact they are labor-intensive with over half of a typical hospital's expenses tied up in wages, salaries and benefits. "Put another way," said Lathrop, "for every dollar spent on direct care, we spend three to four dollars waiting for it to happen, arranging to do it, and writing it down. This can't be fixed by working harder or faster" (22-23).

Case Studies

The Healthcare Forum Journal reviewed six projects where Booz-Allen's model of hospital decompartmentalization was implemented. The facilities were geographically scattered, varied in size and services delivered and the demographics were widely diverse. Reviewing the successes and the challenges that each encountered will be important to either support or not support the notion that restructuring or redesigning the delivery of healthcare is critical to the success of our current delivery system.

The first Medical Center to be elaborated on was Lakeland Regional Medical Center in Lakeland, Florida. Their operating margin was between six to eight percent over the past two years so their financial situation was stable and not deteriorating. The basis for consulting with Booz-Allen was for cost reduction. The operations research team completed their research in 1989 and determined that the pilot project would be on a forty bed unit with the capability of expansion to eighty-five beds. The plan was for a self-contained general surgery service unit. This unit would have

its own mini-laboratory, diagnostic radiology, supply and stock rooms, and administrative records/clerical area. The patient care would be delivered by "multi-skilled practitioners" or cross-trained technicians paired with a registered nurse, referred to as "care pairs". Additionally the staff would be made up of a unit-based pharmacist, unit clerk and a unit support aide that would transport patients, restock supplies, provide maintenance and upkeep. Each care pair was expected to provide ninety percent of all pre- and post-surgical needs for up to seven patients. Unit management consisted of a master scheduler, a clinical manager that coordinated up to seven care teams and an administrative director for human resources, planning and budgetary responsibilities.

The care pair's responsibilities were for total care of the patient. Their job description included records processing and hotel services which represents admitting, charting, charging for supplies, tray passing, transportation, room cleanup, and direct patient care which included assessment, therapeutic intervention, diagnostic test administration and outcome evaluation. Phyllis Watson, Vice President of Nursing, indicated that there were four premises that each employee had to buy into. 1. "Never pass over something you can do yourself. 2. We're going counter to the trend in the industry, we're going to do more things for fewer people. 3. There are no demeaning tasks when it comes to taking care of patients" (25).

The benefits of this patient-focused unit to Lakeland Regional Medical Center are many. Eight months after the initial assessment, significant gains had been made in the areas of service, quality, the work atmosphere, and the economy of care. A seventy percent improvement in the turnaround time for laboratory studies was most satisfying to the physicians. Radiological procedures were simplified by eliminating eight steps in the process for an eighty percent reduction in turnaround time. As a result of simplifying the processes in radiology and laboratory procedures there were significantly fewer errors. Medication errors were the least of all the units in the hospital and patients falling accidentally was nearly eliminated. Based on medical center surveys, staff, physicians and patient satisfaction soared (25).

The financial benefits, although difficult to track by the hospital, are significant. This is demonstrated by satisfied physicians referring more patients to the hospital, patients discharged with a satisfactory experience are more inclined to return for necessary care and staff turnover was significantly reduced as a result of job satisfaction. Statistics that were more easily tracked were the appreciable reductions in length of stay and the direct bedside care costs on the patient-focused surgical services unit. One and three-tenths days were eliminated on average for a patient entering the hospital for a colonectomy. The direct bedside care costs on the patient-focused unit were nine and

two-tenths percent lower per occupied bed than traditional nursing units. This translated into a savings of $1,222 per occupied bed on the forty bed patient-focused surgical unit (25).

Other changes in the processes of delivering patient care at Lakeland regional Medical Center have demonstrated successes. Changing the method of documentation of patient care, where nurses once spent twenty nine percent of their time, resulted in a reduction down to two percent (24-25). An article in Respiratory Care relates an example of duplicate documentation. Blood gas results can be found on ventilator flow sheets, in the respiratory therapy notes, in nursing notes, in physician notes and on the original laboratory slips. Elimination of duplicate documentation and other streamlining of the patient record will save time (450). Other time saving considerations at Lakeland Regional Medical Center were cordless zone phones and alpha numeric beepers, that delivered specific voice messages, allowing care pairs to deliver patient care virtually the entire shift. These changes alone have increased physician and nursing staff satisfaction. No time is spent running back and forth to a central location for phone calls or waiting on hold for the individual to get to the phone. In an effort to motivate the staff to become multi-skilled, Lakeland devised a pay scale that was based on skills and efficiency. Levels of competency were determined by a process of competency testing.

Lakeland Regional Medical Center is convinced that their structure has enhanced service, increased customer satisfaction, improved quality of services delivered and reduced expenses. Their

success was so evident that they rolled out an additional 235 beds dedicated to patient-focused care over the past two years within their medical center and have plans to continue rolling out the process in four additional hospitals within their health system (Weber 24-26).

St. Vincent Hospital and Health Services located in Indianapolis, Indiana was in a similar financial situation as Lakeland Medical Center. They varied the Lakeland model and organized their patient care delivery around "care trios". Care trios were made up of a cross-trained Registered Nurse working with two other cross-trained multi-skilled team members. As with the Lakeland project, physician satisfaction rose significantly. A notable amount of preparation and education was devoted to the physician buy-in for the change project. Nursing staff were a part of developing the process and enthusiasm increased as the project became successful. Patient satisfaction on the patient-focused care unit was ninety percent versus seventy seven percent on the traditional units. Patient length of stay for several diagnoses codes were down significantly and down a total of seventeen percent for all admissions or approximately two days. Bain Farris, the CEO of the facility, believes this is the most exciting venture he has ever participated in and comments, "Even if it turns out to be revenue-neutral, I believe we are already ahead." The plan for St. Vincent's Hospital will be to close down the admitting department, totally overhaul radiology services, revise and improve laboratory services

and eventually convert the entire hospital into a patient-focused hospital. They continue to work toward this goal to date (Weber 26-27).

Vanderbilt University Hospital and Clinic in Nashville, Tennessee, varied from the previous facilities in that it is an academic medical center. Their philosophy also dictated, "Never hand off what you can do yourself." Tennessee state law restricts multi-skilled staff members from performing laboratory functions; therefore, laboratory services were not performed on the patient-focused unit. This facility calculated that cross-training staff would cost them approximately $70,000, however, they realized a nine percent reduction in staffing on their new unit after implementing the changes. The results of satisfaction at Vanderbilt were similar to the pilot programs of the other facilities. Prior to the implementation of the new patient-focused orthopedic unit it took four hours to turn over a unit after a patient was discharged. Now the service associates are disturbed if it takes more than fifteen minutes (Weber 27-28).

Bishop Clarkson Memorial Hospital in Omaha, Nebraska, spent more than one million dollars in construction costs and $236,000 in capital equipment purchases to open their thirty five bed oncology unit. This patient-focused unit can meet ninety percent of the care partners needs including radiology and pharmacy services. Of note in this medical center is the revised admitting process. What used to take up to eight hours from the patient check in to paging the doctor notifying them of the

admission, now takes twenty three minutes. Although implementing this unit was successful without input from the hospital staff as reflected in physician, patient and staff satisfaction, the additional units planned were restructured with staff input. As a result of lessons learned from other facilities, this hospital is rolling out additional units rapidly with a clearly defined map for success (Weber 28-29).

Lee Memorial Hospital in Fort Myers, Florida, seemed to be the most aggressive in rolling out their patient-focused units. They attribute their boldness to patterning their approach based on the success of others. Their "QUEST" project (Quality, Unity, Education, Service and Technology) began in late 1990. They assessed their system as it was, then developed a conceptual design for a new model for delivering patient care services. Their assessment of where they were mirrored the findings of many other institutions. It was discovered that during an average six day hospitalization a single stroke patient was seen by no fewer than 105 hospital personnel, was shuttled over eight miles and the nursing staff caring for this patient traveled over ten miles, spending thirty percent of their time "prepared but idle." James Nathan, CEO of Lee Memorial Hospital states, "We truly believe we are going to realize significant quality improvements and increased customer satisfaction and this will translate into increased market share, decreased patient length-of-stay, personnel retention benefits, and labor cost reductions, adding up to about seven or

seven and one half percent of operating expenses calculated on a conservative basis" (Weber 29-30).

Robert Wood Johnson University Hospital in New Brunswick, New Jersey was the first facility to implement patient-focused care in the intensive care units. With the success of this unit they opened eight additional units. Their successes mirror the successes of the other hospitals in staff, physician and patient satisfaction. Lengths-of-stay were decreased by twenty six percent. This is significant because in the state of New Jersey reimbursement is based on a per-patient basis. If length-of-stay decreases more patients can be admitted. It is expected that with a twenty six percent decrease in length-of-stay they may accept an additional 105 admissions per year which translates into more than $700,000 additional revenue on the orthopedic patient-focused care unit alone (Weber 30).

California Pacific Medical Center in San Francisco, California, has taken an even differing direction on how their patient-focused unit operates. In the article "Patient-Focused Care: A Genuine Change in Health Care Delivery" a project called Planetree was established. This approach differs from the previous facilities in that family members or friends are considered the 'care partners'. In this model patient's medical records are open for review at any time by the patient or family. The rationale is that if patients are going to be consumers of healthcare that they need to know what is going on. Families and/or friends in this setting are taught to care for the patient themselves so that when the

discharge date comes they know how to care for the patient at home. In this program visiting hours are unrestricted and unlimited accommodations are provided overnight for the care partners, friends or family. Additional amenities are available, such as a massage therapist, and a full service kitchen is provided in the event the patient and family want a home cooked meal. Robin Orr defends this concept by pointing out that this is not just another far-out California experiment. She states, "Our mission is to redirect and recreate a health care system from the patient's perspective by humanizing, personalizing, and demystifying the health care experience." The rest of their patient-focused unit concept and implementation plan substantiated the findings on all of the other projects across the United States. In reality, this facility believes that the patient should be at the top of the pyramid and that, in doing so, total quality management is operationalized in a new way (6-7).

Role Of Varying Staff Disciplines in Patient-Focused Care

In an average 500 bed hospital there are 350 job classifications with 275 of them having less than ten employees. Specialization of this magnitude leads to fragmented costly service. As an example, the process for a patient to get an Electrocardiogram (EKG) is that the physician tells the Registered Nurse that the patient needs an EKG; the nurse tells the ward secretary, who calls the EKG department. The clerk in the EKG

department notifies the transportation department. The transporter calls the ward secretary to see if the patient is available on the unit and then transports the patient to the EKG department for the EKG technician to perform the EKG. The purpose of developing patient-focused care units is to provide most of the services necessary for a patient that are normally provided by laboratory, x-ray, pharmacy, respiratory care and nursing. Cross-training unlicensed staff is relatively straightforward. Individuals that perform admitting, housekeeping, transporting, supply inventory and distribution, phlebotomy, EKGs, basic respiratory treatments, some physical therapy treatments as well as non-skilled nursing tasks would be able to be cross-trained to do all of the above. As previously mentioned, regulations and licensing requirements vary from state to state and affect the cross-training of non professional tasks in radiology and pharmacy.

Judy Casidy emphasizes that the intent of patient-focused care is not to do away with specialties but more of finding a full day's work for all staff members. It is believed that as a result of cross-training and other necessary issues, sixty to seventy percent of all job classifications will change in a significant way; and that by reorganizing and flattening the organization, sixty to eighty percent of all jobs will have a different reporting relationship. A new approach that is materializing is making management accountable for specific groups of patients and then giving them the structures to be held accountable through direct line relationships (20-21).

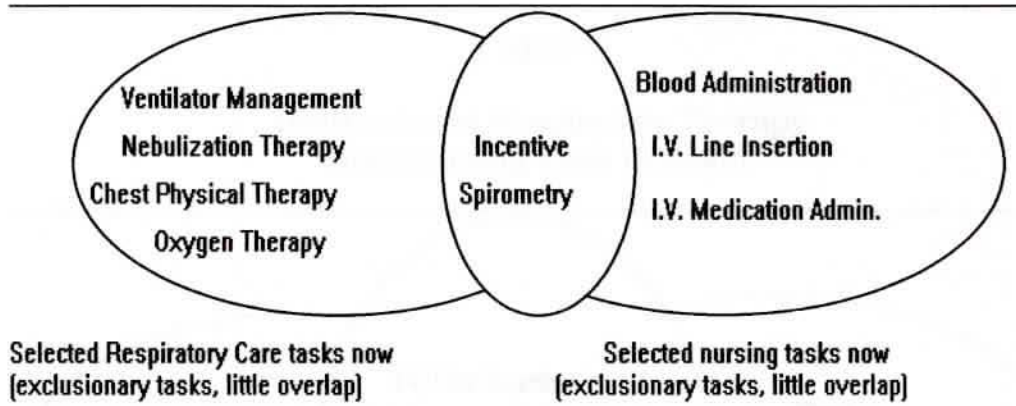
Laboratory personnel have also noticed the benefits resulting from focusing support services around the patient. Members of the laboratory staff at Mercy Hospital and Medical Center were selected to participate on a committee whose main goal was to train laboratory phlebotomists to be nurse assistants. As pointed out in the article, "The Role Of The Laboratory In A Patient-Driven System," the end result of the cross-training was, improved specimen delivery, decreased turnaround time, decreased number of laboratory tests ordered stat and an enhanced working relationship between the patient-focused units and the laboratory staff. Prior to the start up of the patient-focused care unit, laboratory work would come to a halt because of lost blood tubes, waiting for a transporter to deliver a blood tube, or determining what to do with mislabeled tubes. The phlebotomists were excited to learn how to do EKGs, take vital signs, provide basic respiratory treatments and other miscellaneous tasks. Being part of the designing and implementing process of the new unit improved their overall attitude about their job and the importance they had to the institution. Phlebotomists that were not participants in the cross-training for the patient-focused unit were cross-trained for other functions within the laboratory such as computer operations or specimen processing. Another positive outcome as a result of the laboratory personnel's involvement in the process of developing the patient-focused unit, was the redesign of the entire laboratories processes which resulted in further suggestions for efficiencies and cost cutting (54-55).

Registered nurses seem the most affected by the changes or the redesigning of how patient care is delivered. Florence Huey suggests in the article, "Is Everything Everyone's Job?" that if an x-ray technician is busy bathing a patient and the nurse is available, the nurse can shoot a routine x-ray. Ms. Huey, also an RN, has concerns that cross-training nurses, technicians, and aides will form them into a mediocre group of patient care givers (7). The literature reviewed as written by countless other RNs and healthcare providers does not support this notion. Patient-focused units have only been in existence for the past five years so it may be too early to determine if the overall concept will be successful. Restructuring however should be a path to travel rather than a destination to reach. Each facility that implements patient-focused care units cautions that the concept should be tailored to the project as it applies to their institution. John Hyde comments that the concept of multi-skilled or cross-trained staff may be controversial regarding issues of licensure and certification, such as within the registered nursing profession, however, the noticeable benefits of such a staff-extending and cost-effective method are difficult to overlook. He further explains that, "it is better to have self-initiated alternative methods, than to be the beneficiary of some well-intentioned third party that does not understand the situation" (60). Examples of well-intentioned third parties would be the federal government and the countless subsidiary regulatory agencies that have evolved from the government.

Respiratory therapists believe that patient-focused care will be an unsurpassed opportunity to increase the breadth and depth of the clinical care that they provide and further opportunity to develop their professional image. Patients have the right to know why the hospital charges sixty dollars per day for oxygen or why a medicated treatment may cost up to fifty dollars. Gregory Snyder indicates that the answer to the question is due simply to the inefficiency of the hospital structure. In a hospital that has patient-focused care, respiratory therapists are trained to start intravenous lines, attach electrodes and perform EKGs, draw blood and perform basic laboratory tests. Additionally, many are trained to make patient assessments and provide basic or non-professional nursing care. Nurses on the other hand are cross-trained to provide basic respiratory care, incentive spirometry, chest physical therapy, and oxygen administration (448). In the article "Patient-Focused Hospitals: An Opportunity for Respiratory Care Practitioners," it is explained that not all services can be shared. Each professional discipline will retain the most involved processes but will share with other disciplines sixty to eighty percent of their skills. Figure 4 demonstrates selected respiratory therapy and nursing tasks in a non patient-focused care environment. Figure 5 demonstrates the amount of overlap that occurs between registered nurses and respiratory therapists in a patient-focused care hospital. It may also be noted that this same concept may be applied to many other disciplines.

Figure 4

Traditional Respiratory Therapy
and Nursing Task Division



SOURCE: Respiratory Care. Exhibit from "Patient-Focused Hospitals: An Opportunity for Respiratory Care Practitioners," by Gregory M. Snyder (1992).

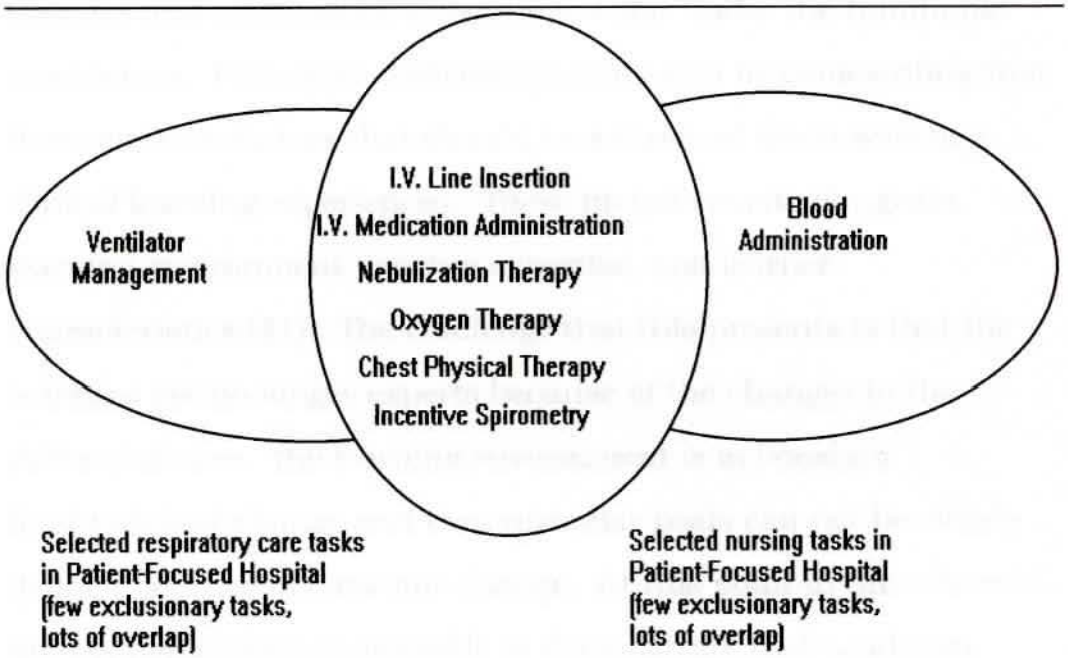
The majority of professional staff in patient-focused hospitals have come to realize that there is much more job security for the practitioner who can manage ventilators, perform EKGs, intubate patients in an emergency, start intravenous therapy, pass medications, take x-rays, assess patients and a myriad of other additional patient care tasks than the practitioner with fewer skills or those that resist the changes necessary for financial viability (449-453).

Lastly, a consideration of significant importance, is the need for academic institutions that educate professional healthcare

providers to communicate with hospitals and medical centers to implement the necessary changes to train for the new directions of

Figure 5

Restructured Respiratory Therapy
and Nursing Task Division



SOURCE: Respiratory Care. Exhibit from "Patient-Focused Hospitals: An Opportunity for Respiratory Care Practitioners," by Gregory M. Snyder (1992).

healthcare delivery. Frances Fothergill-Bourbonnais explains that it is only in the actual clinical settings that students are socialized into their roles as professionals. Actual practice allows the students to learn to make decisions in constantly changing patient situations. Educators have the responsibility to provide

educational opportunities in real settings that will prepare students to become practitioners (37). The learning environment in an acute care setting today combines high patient acuity, increased technology, multiple health professionals and financial restraint on staffing resources. This environment has provided challenges to the educators preparing professionals for the future. Colleges and universities continue to train under the traditional curriculum. Fothergill-Borbonnais concludes by commenting that there are four factors that should be addressed when selecting clinical learning experiences. These include curricular goals, learning environment, teacher expertise, and learner characteristics (41). The challenge that this presents is that the teachers are no longer experts because of the changes in the delivery of care, the learning environment is in constant fluctuation or change and the curricular goals can not be clearly defined because of constant change. At this point in time there is not enough literature available to demonstrate that academia, regardless of the clinical profession, is making any changes in their curriculum to introduce students into an ever changing environment with adequate preparation.

Summary and Statement of Hypothesis

Healthcare providers in the 1990s have recognized the necessity to change the methods of delivering healthcare as a result of increasing demands to drive down costs. Institutions

that provide healthcare are beginning to assess their delivery system. Consumers count on decreasing costs and are expecting higher quality of services. With increasing pressures from several different directions, creative entrepreneurs within the healthcare delivery system have arrived at alternative methods of providing high quality care with a recognized reduction in the cost of this care.

One of the methods is called patient-focused care. Efforts to implement this process have proven effective as a result of paying particular attention to communicating candidly to all parties that this process may affect. These parties, to name a few, consist of managers, staff and physicians. Additionally, significant changes in the paradigm of how care should be delivered were identified. Chief Executive Officers realize that shifting paradigms require a certain amount of risk. It is necessary for them to assist with the implementation of the new concepts as well as ensure a certain degree of success. Professional and non-professional staff within the many hospital departments have to be cross-trained to perform additional tasks that would ensure the success of this new team concept. Lastly, the introduction of updated, integrated hospital information systems proved to be the determining success of implementing the concept of patient-focused care. As a result of this, it is hypothesized that institutions providing healthcare must redesign their information systems to meet demands of an ever changing system of delivering care.

Chapter III

SELECTIVE REVIEW AND EVALUATION OF RESEARCH

Chapter one has clearly identified the necessity for healthcare reform and the need to restructure the existing system of delivery. The current system is riddled with inefficiencies of varying degrees within different institutions. High cost definitely has to be driven out while maintaining the quality the consumer anticipates and expects. It was further discussed that without reforming and upgrading hospital information systems and the method of documentation, that many of these high costs would continue. Chapter two summarizes different approaches that healthcare providers have taken to meet the needs of an ever changing delivery system. The competitiveness of the delivery system has become evident as a result of an abundance of unused hospital beds. This in part can be attributed to a shift in inpatient versus outpatient care and advanced technology. Technological advances within hospital information systems will allow facilities to make the changes that are critical to the success of their institutions.

The computerized patient record is defined in the article by Margaret Amatayakul. She indicates that there are many interpretations but three documents best describe the concept. First, the General Accounting Office (GAO) issued a report to the Senate in 1991 describing a situation in which the existing form

and format, ownership principles, and all other elements of today's medical record are transferred from paper to an electronic medium. The second document is from the Institute of Medicine's Patient Record Study Committee's 1991 report. This report describes a more futuristic view of not only the record, but a system of information processing in which today's record is virtually transformed into the very core of healthcare delivery. Thirdly, the Computer-based Patient Record Institute's vision statement addresses the concept as:

* universal, timely, and intuitive access to lifetime health data collected and maintained across the continuum of care;
* support for continuous quality improvement in healthcare delivery;
* ready access to knowledge bases to support clinical practice, administration, education, and research; and
* patient participation in health status documentation, wellness, and disease prevention while maintaining the confidentiality of sensitive patient and provider data (39).

With this understanding of the computerized patient record (CPR), significant changes must occur before providers can proceed.

Another agency that has a controlling influence on how healthcare providers do business is the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Elizabeth Gardner's article reminds providers that the JCAHO is requiring

capabilities that many hospitals do not currently have and furthermore, compliance is required within two years of a survey. At least three of the requirements for 1994 were virtually impossible without a computer system (12).

Changing the current system of documentation can also be tied directly to the economic impact healthcare has on the U.S. budget. The United States spent more than $800 billion on healthcare in 1992, more than any other country in the world. In the article, "AHIMA and Healthcare Reform: Building the Computerized Patient Record is Like Putting a Man on the Moon," it was pointed out that in 1994 if spending healthcare dollars continued at the current rate the United States would have spent over one trillion dollars. In 1992 over $200 billion of the federal budget was spent on Medicare and Medicaid. It was further commented that automation of the medical record and the use of electronic data transfers for claims processing would increase efficiency, reduce administrative expenses and improve on productivity (103).

Several working groups have been established to address areas of concern and potential challenges to implementation of the CPR. In developing such a system, especially if CPR is developed to the point of the Computer-Based Patient Record Institute's vision statement, patient confidentiality and the security of the system are sensitive concerns. Many states have instituted laws prohibiting automation of portions of the medical record.

Another issue is the verification of the physician's signature on medical records or the requisition of a patient's record from the medical records department if the system is fully automated. HCFA, JCAHO and state health boards want the actual signature of the physician. According to the article "Auto-authentication Illegal, HCFA Confirms," Wayne Smith, director of the hospital division of HCFA's Health standards and Quality Bureau is quoted as saying, "We want to be open to the possibility that we might want to change our view" (1). Statements such as these are made by many governmental and regulatory agencies that affect health care and the CPR system. Many of the agencies that are involved in working groups have conflicting viewpoints which must be sorted internally before the groups will be able to proceed.

The article "Toward an Electronic Patient Record" indicates that working groups are divided into five major components with a primary goal of eliminating roadblocks to a computerized patient record. Two of the components are divisions within the Federal Government that wish to develop a system independent of the civilian sector. The third component, Workgroup for EDI (WEDI) has already developed fifteen recommendations to implement Electronic Data Interchange (EDI) within five years. A contingency of fifteen organizations, making up the fourth component, call themselves The Health Industry Standards Planning Panel. They identified a dual task of developing not only national standards but standards to meet future need of the European market. Lastly, the

Computer-based Patient Records Institute (CPRI) is dealing with issues such as confidentiality, legislation and developing a unique identifier code for patients. As a result of these groups working together and focusing on a common goal, many laws and existing paradigms are being changed (5).

The article continues indicating that in the past there was no need to standardize medical records. Medical record format is different in nearly every hospital making it difficult to develop a concept model and impossible to develop a plan for standardization (2).

Even with the cooperation of all the working groups and the focus on developing a system that is workable in the future, there must be further legislation passed in order for CPR to progress. As previously noted, many state laws prohibit automation of medical records. Before these restructured information systems become a reality, data protection and confidentiality laws for computer based health records must be passed and guidelines for transfer of existing medical records to an electronic medium will be necessary. Another area that will require reform is within the insurance industry. Some type of legislation for insurance identification must be enacted.

Once all the above issues are resolved, the question of what all this will cost and who will pay for it surfaces. The Health Care Financing Administration (HCFA) has estimated that approximately eighty billion dollars will be necessary to implement

computerization of patient records, further commenting that healthcare providers should not expect financial support of the Federal Government. The Federal Government will provide expedited legislation necessary to implement the new information systems and the working groups have recommended that funding be supported by tax incentives (4).

Other challenges to implementing a computerized patient record are hospital administrators and physicians. Physicians want a computer system that will work without difficulty and realize that any system is better than a paper system. Physician buy-in, however, is critical making it important for hospital information system staff to solicit their input. According to Joe Weber, if the physician is able to instantly retrieve, display, and synthesize the most useful information and make critical clinical decisions on individual patients there would be immediate buy-in. The CPR is also capable of comprehensive case-mix statistics, automatic coding and billing, quality reviews, rigorous utilization and teaching (42). Physicians totally understand the time savings these features would have on their practices and would welcome this type of system.

Administrators currently are unfamiliar with the problems that face medical records staff and the push from regulatory agencies to implement a CPR. A grass roots approach to educating administrators is critical for their understanding. Department heads from all areas of the hospital that would benefit from the

CPR need to be selling the idea and communicating the urgency. In the article by Carol Valentine the appointing of a project manager was suggested. This individual must be the visionary and advocate of CPR. Their primary focus after researching trends, technologies and methodologies is to conduct a market analysis. Collaboration with the Information Systems Manager is important since they will need to evaluate costs, the system requirements and interfacing capabilities with the current system (62). Once the homework is completed the presentation to the executive level is important. Topics need to be presented with solutions to concerns especially in regards to physician and patient confidentiality. Physicians' practices are very competitive and they are concerned about losing patients to other physicians. Administrators share in this concern since business relationships are developing between hospitals and physicians. The executive group needs to be able to share additional concerns with the project manager and allow time to evaluate their concerns.

One of the exciting serendipities of the CPR is that there are immediate benefits after its implementation. From the physician's standpoint lab results are available more quickly, allowing for more rapid diagnoses and treatment. Also visits to medical records departments to complete entries are eliminated and immediate access to patient information is available from any location within or outside the hospital. From the patient's point of view, departments receiving patients are ready for them when they arrive

rather than having to further input information or duplicate questions already asked of them. The hospital benefits in eliminating duplication of tests, immediate communication with insurance companies for admission criteria, elimination of any redundancy, accurate rapid documentation, no loose forms, quicker billing and claim processing and decreasing patients length of stay. All of this creates immediate savings of healthcare dollars to the patients and their insurance companies, increases potential reimbursement to hospitals because of increased efficiency and creates a medical record that is concise and properly stored with increased compliance in confidentiality. When patients are discharged to extended care facilities, their entire medical record may be electronically sent to the facility without the usual delay of four to five days (Davidson 20). Elizabeth Gardner discussed a 1993 study completed at a Midwest hospital on the CPR. In this case study the hospital showed a savings of $900 per case. The reasons given for the savings were reminders about drug costs and lab test frequencies. Additionally, it was discovered that physician's treatment patterns were able to be analyzed and as a result new practice guidelines were developed to improve the quality of care and cut costs (44).

Lisa Pietrobergo, a Registered Nurse in a local physician's office, reviewed the current process a patient must follow to be admitted to the hospital for treatment, indicating that it is time consuming and cumbersome. Patients wait to be seen in their physician's office. Oftentimes the wait is prolonged due to the vast

amount of paperwork that is required by multiple third parties. When the physician finally sees the patient, laboratory tests are ordered over the phone to the nearest laboratory facility. The patient then waits for the physician to get the results called back to them or has the nurse call the laboratory for the results. Frequently, due to lack of communication and poor quality controls, the tests ordered were not the tests done on the patient. Further tests must then be ordered. When the results are finally communicated to the physician and a decision is made to admit the patient, the individual is sent to the hospital. The physician or the hospital must contact the insurance company to determine whether the patient meets the current criteria for admission. Additional lab tests are ordered because the outside lab does not have the capability to quickly get the results to the hospital.

The patient arrives in the admission area and waits in line to be admitted. The clerk begins the litany of questions that the patient already gave the physician's office staff and then reconfirms the admission authorization with the patient's insurance company. The patient is then taken to the nursing unit where the nurse assigned to the patient begins to ask the medical history and inquires as to why the patient is coming to the hospital. The patient again goes through their entire history because it is necessary to fill out certain forms to meet regulatory requirements. The physician is then notified that their patient is in the hospital and orders are given to the nursing staff to begin treatment of the patient's illness. Once all the paperwork is filled out and all the

tests, medications and treatments are ordered, there is another delay. The pharmacy needs to fill the orders, laboratory services needs to send a phlebotomist to the nursing unit to draw the necessary blood for further testing and appropriate equipment for treatment needs to be brought from other support departments. The physician arrives at the hospital the following day to see the patient only to be confronted with difficulty in getting all the information together because all the test results have not reached the patient's record. Additional laboratory tests are now ordered "stat" so that results will be called to the nursing unit within the hour. Without the appropriate laboratory test results, the physician is unable to order the necessary X-Rays or further diagnostic studies. The patient's hospital stay is lengthened because of multiple delays.

Unfortunately, Pietrobergo points out, this process has generated a patient record with over 100 pieces of paper. All these papers from the nursing unit, pharmacy, lab and other ancillary departments takes three to five days to reach the medical records department and many items are lost. When the patient is discharged, the medical record is filed or misfiled in a cavernous file room until the next admission. In many cases patients are transferred to other treatment facilities and their record may not even be together to send to the facility with the patient. As a result of an incomplete record, further testing is done and other duplication of services are performed in order to provide the patient with the necessary treatment.

Pietrobergo agreed that a computerized patient record with EDI would change the scenario. It's possible that with CPR and EDI the physician would see the patient in their office. If the physician believes the patient needs to be admitted, the office nurse would key into the computer the appropriate laboratory tests, radiological studies, pharmacy orders and dietary requirements. Each of these orders would be transmitted to the appropriate department within the selected hospital. All of the patient's historical data and medical history would then be transferred to the hospital information system. All departments now know the patient is coming to the hospital. While the patient is enroute, the registration staff is alerted and immediately has access to insurance information and appropriate demographics. Electronically the insurance company has already approved admission and the nursing unit is awaiting the patient's arrival.

As the patient arrives on the patient-focused care unit, an identification band is placed on their arm. The nursing staff then brings up the patient information on the bedside computer and only needs to ask appropriate questions for this admission without duplication. The medications from the pharmacy are already waiting on the nursing unit for the nurse to administer to the patient. Appointments are already set up for cardiac and radiological tests and the nursing staff is able to draw the appropriate lab studies. While the patient was on the way to the hospital, the physician can dictate the history and physical into the hospital system. Within a few hours of admission the

physician may access the hospital information system with his security code and is able to pull up his patient's entire hospital record from his office computer. All the laboratory tests, cardiac and radiological test results are available and the times when medications were administered is documented. Based on these results, further orders can be put into the computer and completed before the physician makes rounds that evening. In the event the patient needs to be transferred to another facility, the entire record may be electronically transferred to the new facility for consistent continuing care. The admitting or family physician still has access to the record in the new facility.

The long term benefits are important to the final decision to convert to a totally electronic system. Third-party payors are requesting additional information to adjudicate claims for reimbursement. The use of electronic data interchange increases the efficiency in the healthcare delivery system by reducing administrative costs and improving productivity. Streamlining the documentation at point of care improves overall patient care by allowing the healthcare providers to systematically evaluate practices and policies. Analysis of patterns of illness, treatment and health in new, expansive ways would be available to healthcare providers through national data bases. This would allow practitioners to check their findings with other colleagues or allow for literature searches.

Richard Davidson, president of the American Hospital Association, reports that the Blue Cross and Blue Shield

Association has estimated that the computerized patient record will result in a $40 billion per year savings by eliminating inappropriate and duplicated medications and services. Coding records for insurance purposes will save the average hospital $50,000 per year for an estimated national savings of over $315 million. Additional savings of administrative expenses are estimated at $14-30 billion. It is believed that this is only the tip of the iceberg (22).

In the early 1960's the American space program was headed downhill. John F. Kennedy's message to the American people was that by the end of the decade the United States of America would have the first man on the moon. This was the challenge of that decade according to the article in the Journal of AHIMA (104). Implementing the computerized patient record may be the challenge of this decade for the healthcare industry. It has already been determined in the literature that the CPR benefits patients, providers, researchers, epidemiologists and our society at large. In addition, savings from less paper work, more economical recording and coding, as well as cost savings through a reduction of duplicate tests are expected. The challenge of the last half of the 1990s is to create unilaterally acceptable standards, further develop the technology, pass legislation necessary for electronic medical records and motivate healthcare providers to change.

Waiting for regulatory agencies, whether governmental or otherwise, to provide the leadership necessary to move this project on has proven too costly to providers in the healthcare industry.

Several healthcare providers within the United States, have independently decided to take the lead and develop a system that will drive down the costs. Consumers, providers and third party payors are demanding that this process be initiated now. This statement is reinforced in a report prepared by The Research and Planning Group for Missouri Baptist Medical Center's Service Redesign Team. Patient and physician focus groups revealed that they were most frustrated with duplication of information, amount of paper work, cumbersome billing processes and difficulty in retrieving laboratory studies (4-5). All of these issues are related to the lack of an adequate information system.

In the report "The Hospital of the Future: Can the Patient-Focused Model Really Work?", it is pointed out that all of the Patient-focused hospitals, reviewed in the case studies discussed in Chapter two, participated in the Chicago Health Executives Forum (CHEF) (10). These hospitals were geographically scattered. Five of the eight hospitals worked closely with consulting firms. Most of the institutions were given grants to strengthen nursing practice and improve patient care. Seven of the eight hospitals participating in the forum were not-for-profit facilities. All of the hospitals were larger hospitals with two of them having over 500 beds. The entire group of hospitals were short-term, acute-care facilities with a common thread of a visionary Chief Executive Officer. Each facility underwent operational analyses to determine the changes that would be necessary to implement a more service

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oriented business. After the analysis some or all of the hospitals shared in the following findings:

* Work too fragmented, process intensive and compartmentalized
* Too much time wasted by waiting, coordinating and scheduling activities
* Lack of empowerment in administering care
* Administrative barriers blocked efficiency
* Continuity and quality of care compromised because of too many people involved in the delivery of care to one patient
* Departments and people were efficient but duplication occurred between departments (inefficiencies were the result of structure rather than people)
* Operations were frequently driven by departmental needs rather than patient's needs (12)

All facilities that participated in this forum reported having to make major changes in their medical records in order for patient-focused care units to function optimally. The volume of data in the medical record was reduced as a result of adopting standard patient care protocols based on expected activities and outcomes for particular groupings of patients by diagnoses. As a result of the protocols, staff were expected to chart only on care that deviated from the expected outcomes. This decreased the amount of time nursing personnel spent documenting patient care. At Lakeland Regional Medical Center in Lakeland, Florida nurses, prior to their model of patient-focused care, spent twenty-nine

percent of their time charting. This was reduced to two percent. Vanderbilt University Hospital and Clinic in Nashville, Tennessee reported a thirty-one percent reduction in time documenting in patient's records as well as forty-three percent decrease in time spent coordinating and performing other clerical activities. Bishop Clarkson Memorial Hospital in Omaha, Nebraska reported a fifty percent decrease in time spent on documentation (26).

All hospitals that participated in the forum reported that automation offered them potential opportunity for savings. It was further pointed out that a patient-focused hospital must be prepared to either accept the functionality of their current software, invest in a costly development effort to design a system, or deal with partial automation and manual systems. It was also noted that point of care terminals increased the efficiency of all caregiver personnel because of the elimination of "running around to find the patient's record" and the duplicity of writing information down on a sheet of paper before transcribing the information into the patient record. Additionally, on-line information supports accuracy and efficiency of patient information that accelerates analysis of data necessary to support clinical decisions. As a result of automated patient records, charts completed within twenty four hours of discharge enhance the hospital's cash flow as patient's accounts can be processed more expeditiously (27).

There are only a couple of consulting firms in the United States that specialize in working with facilities that wish to develop

patient-focused units. The recognized expert, evidenced by the majority of hospitals working with their firm is Booz, Allen and Hamilton, Inc. followed by Anderson Consulting. Their techniques are similar as pointed out in the findings of the Chicago Health Executives Forum. Additionally, their findings support that facilities that wish to embark on the journey of converting to patient-focused care must either have in place or develop the information system to support this endeavor. The literature reviewed offers support for the hypothesis that information systems must be upgraded and updated in order to be able to support the rapid changes necessary for the delivery of healthcare.

Chapter IV

RESULTS

An extensive examination of the literature has been completed justifying the need for restructuring the existing method of delivering healthcare in the United States today. Chapter one provided evidence that supported redesign or restructuring in areas as it related to changes in reimbursement, increased costs, consumer education, technology, staff utilization and the need for a computerized patient record. Chapter two reviewed the ground work for change, consumer's expectations as well as demonstrating the process that would be necessary to begin restructuring. Additionally, chapter two examined hospital's existing information systems and the need to invest in new technology to meet the information system needs of the future. Finally, employee issues from the CEOs to the ground level care givers and support staff were discussed in multiple case studies throughout the nation. Chapter three provides an in depth review of the concept of a computerized patient record (CPR) as well as the process of implementing the CPR. Further discussion was provided on the benefits and disadvantages of this system as well as a comparison and contrast of past and existing technology. Case studies were also reviewed to demonstrate the necessity for upgrading existing systems and the challenges that healthcare facilities face.

In this chapter a review of the results as they relate to the process of redesign will be illustrated. Topics to be reviewed will include cost reduction benefits as well as improved patient and physician satisfaction. As previously discussed, patient-focused care has become a buzzword of the 1990s. A survey conducted by Hospitals in February 1993 indicated that nearly half of all hospitals in the United States were either implementing or considering some level of patient-focused care (14-19). Pioneers of the patient-focused care concept have been carefully examined by not only health care providers across the nation but by the Health Care Advisory Board. The Health Care Advisory Board is a not for profit group of professionals that gather specific related data from participating health care providers, regardless of the size of the institution, synthesize the data and report their findings to members that contributed information. Additionally these findings are made available to other members per request.

Today, a number of hospitals have moved the concept of patient-focused care from the experimental stage to the operational stage and are demonstrating millions of dollars in savings as well as improved physician and patient experiences. In the article "Cost Reduction Using Patient-Focused Care Concepts, " case studies of three of the most successful hospital programs are reviewed. The literature suggests, and this article supports, that successes are evident in all facilities that attempt some degree of restructuring. Their success however, based on cost savings, is a result of three

factors: the level of change implemented, size of investment required to effect change, and the time frame for implementation (43). Although it's certain that there are examples of total failures in patient-focused care or service redesign programs, these failures are not discussed in the literature that has been reviewed.

Three organizations, in 1996, have risen to the top of the health care industry by demonstrating excellence in their ability to effect patient-focused care. All three institutions have utilized patient-focused restructuring to increase their competitiveness, with outcomes that encompass improvements in operating costs, quality and consumer satisfaction (44). The three organizations participating in the case study were Mercy Healthcare in San Diego, California, St. Mary Medical Center in Long Beach, California, and Spohn South in Corpus Christi, Texas. Even though the three institutions started with a similar set of principles for patient-focused reengineering, as demonstrated in Table one, their overall methods of implementation were very different. Mercy Healthcare started small with the overall vision of rolling out the patient-focused concept to all aspects of their operation. All patient care delivery areas are now up and running and nonclinical areas such as finance are evaluating the benefits for their departments. St. Mary Medical Center is the first hospital to completely restructure their system to a fully operational patient-focused care delivery system (Snyder 44). Spohn Health System, considered to be the premier delivery system in the Corpus

Table 1

Comparison of Change Implementation

Primary Changes	Mercy Healthcare	St. Mary Medical Center	Spohn South
Deployment/ decentralization	All services -- as defined by patient needs	Most clinical services except radiology and lab; all service and administrative	Most clinical services except radiology, lab, advanced physical therapy; most service and administrative (no coding of patient chart)
Multiskilling/ cross-training	Administrative, technical, and service cross-trained jobs; some clinical cross-training	Administrative, technical, and service cross-trained jobs; some clinical cross-training	Clinical, administrative, and service cross-trained jobs; development of case manager role
Process simplification	CQI councils actively review processes processes	Concerted effort between remaining central departments and deployed functions	No formalized process to root out more ambiguous opportunities
Management and organizational restructuring	Significant management restructuring; no business center structure	Management restructuring along business center lines	Management restructuring along business center lines
Empowerment	Shared governance formally employed	At director levels only; underway with staff empowerment	Shared governance system approved; to be implemented soon
Integrated care team structure	Some self-directed team structures	No formal care team structures	Service and clinical staff work together; no formal assignments

SOURCE: Managed Care Quarterly. Exhibit from "Cost Reduction Using Patient-Focused Care Concepts," by Glenn H. Snyder and J. Philip Lathrop (1995).

Christi market chose to implement the patient-focused concept to reduce operating costs while improving their service quality. As a result of various internal and external factors, each of the three facilities chose significantly different paths to implement their restructuring program. Implementation options, as discussed in the article "Using Patient-Focused Cost Concepts", are categorized as either unit-based or functional. Unit-based is the redesign of jobs, processes, and supporting structures in groups of forty to sixty beds. This involves changing nearly all services such as bedside care, administrative functions, ancillary services and service functions. Functional implementation is the implementation of new, multi-skilled jobs house wide and changes in the processes that include admitting, discharge planning and medical record coding for all patients. California state professional laws and regulations as well as federal laws made cross-training difficult, but wherever possible cross-training was implemented (45).

Even though the process of restructuring requires ten to twelve months to implement primary changes in high-priority areas, substantive cost reductions and sustainable improvements in service levels were realized in the most recent case studies. Payback occurred in all facilities within one to six years. Rates of return on investment averaged over fifty percent. Cost per case declined by an average of eight percent. Lastly, quality and satisfaction were either maintained or improved based on qualitative surveys of patients, staff, and physicians, and

quantitative review of clinical indicators such as mortality, morbidity, falls and nosocomial infections (Snyder 47).

Table two summarizes the investments required for each organization which included:

* Capital for facility, equipment and information system changes
* Incremental wages incurred for design, development and training
* Consulting fees

Table 2

Summary of Investments Required for Each Case Organization

	Mercy	St. Mary	Spohn
FTE Baseline*	1,882	1,730	340
Net Present Value of Investment (@ 10%)+	$4,400,000	$3,900,000	$1,100,000
Starting Admissions	19,500	14,000	3,400
Starting Adjusted Patient Days	126,700	133,800	20,100

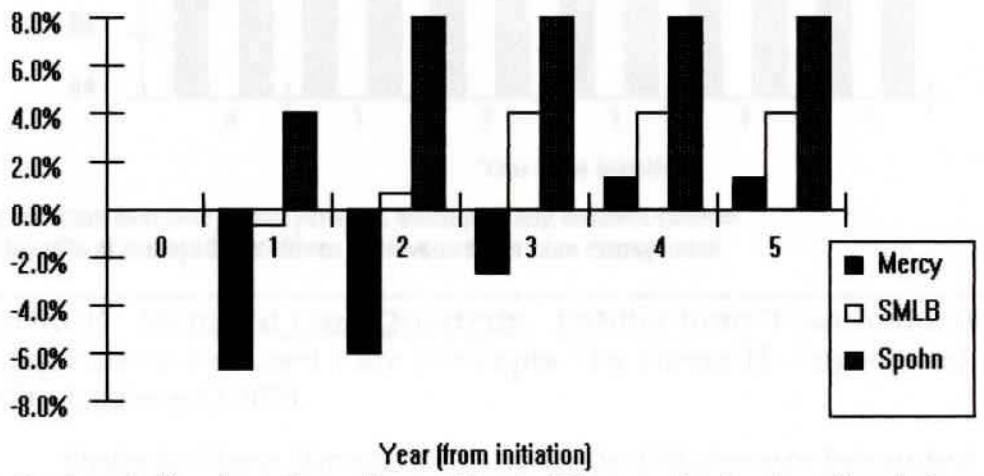
*Note: Baseline may not include all FTEs, such as community service, HMO, or PHO staff
+Note: Investment includes incremental training, consulting and capital outlays

SOURCE: Managed Care Quarterly. Exhibit from "Cost Reduction Using Patient-Focused Care Concepts," by Glenn H. Snyder and J. Philip Lathrop (1995).

Despite large investments, all three organizations recognized notable economic benefits. Net wage and salary reductions averaged over five percent on a volume-adjusted basis, as indicated in Figure six.

Figure 6

Cumulative Net Savings (Volume Adjusted)
(Reduction in Salaries/Benefits Cost)



Savings relative to a baseline adjusted by equivalent patient days (outpatient visits factored in).

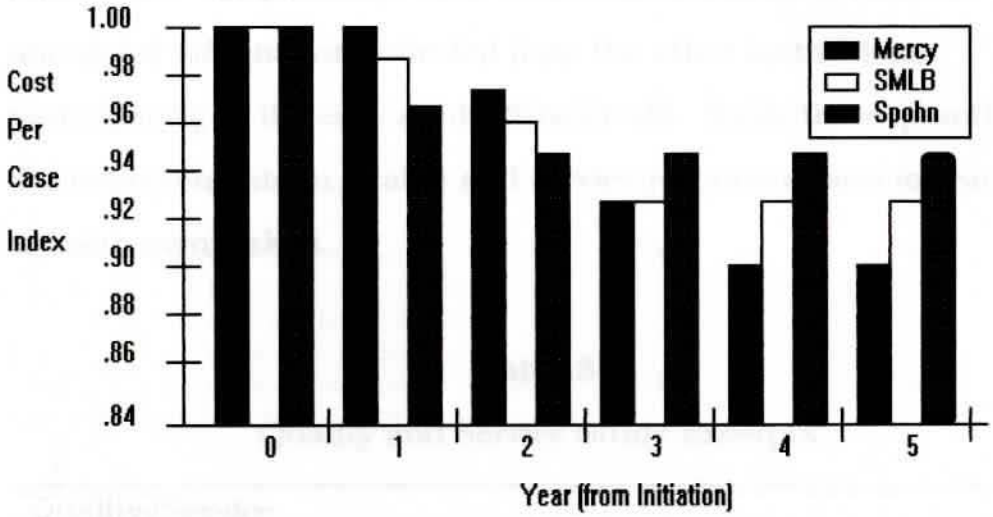
SOURCE: Managed Care Quarterly. Exhibit from "Cost Reduction Using Patient-Focused Care Concepts," by Glenn H. Snyder and J. Philip Lathrop (1995).

Substantial reductions in length of stay as a result of improving service responsiveness and decision making has also driven the overall cost per case down by an average of eight percent (Figure 7).

Figure 7

Cost Per Case Index

(From Baseline)



The reduction over time in cost per case, which probably includes some of the benefits of managed care-driven improvements in case management.

SOURCE: Managed Care Quarterly. Exhibit from "Cost Reduction Using Patient-Focused Care Concepts," by Glenn H. Snyder and J. Philip Lathrop (1995).

Organizations throughout the United States are becoming more comfortable with the conclusion that patient-focused care is no longer in the experimental state. The facilities that are implementing patient-focused care now are realizing repetition in operational designs. This is allowing facilities to adopt standard design programs rather than attempting to customize a program to meet their needs. Two areas recognized as priority are: focusing on functionality rather than aesthetics, and emphasizing deployment and cross-training of services such as respiratory and

physical therapy rather than capital-intensive services like lab and radiology. Although Mercy Hospital is the only organization that has completed thorough analysis of the effects on quality and consumer satisfaction, its results mirror those of the original innovators. Additionally, their results are consistent with the anecdotal information collected from the other institutions participating in the case study (Snyder 49). Table three quantifies the improvements in quality and service responsiveness for each measurement taken.

Table 3

Quality and Service Study Excerpts

Quality/Service Measure	Pre-PFC	Post PFC	Units
Patient satisfaction	90.0%	92.0%	Percent satisfied
Medication errors	3.4	.9	Number/ 1,000 days
Patient falls	6.4	3.4	Number/ 1,000 days
Bloodstream infection rate	0.27	0.22	Number/ 100 discharges
Admission time	14.0	1.9	Minutes
Lab turnaround time	113	57	Minutes

SOURCE: Managed Care Quarterly. Exhibit from "Cost Reduction Using Patient-Focused Care Concepts," by Glenn H. Snyder and J. Philip Lathrop (1995). As cited by the Mercy Orthopedic and General Medicine pilot study.

Mercy further identified that the majority of their employees and physicians agreed that patient-focused care improved their

ability to deliver care, the effectiveness of their care and the patients' perception of the care (Table 4).

Table 4

Constituent Survey Excerpts

Constituents Surveyed	Survey Questions	Strongly Agree	Agree	Disagree	Strongly Disagree	No Response
Care partners	I believe that the Care Pair concept has improved patient care delivery.	20%	59%	14%	7%	0%
Care partners	I feel that my multi-skilled, expanded role helps me give better care to my patients.	33%	45%	14%	8%	0%
Care partners	I am more satisfied with my job since Care 2000 was implemented on this unit.	24%	46%	19%	11%	0%
On-Unit specialists	I prefer applying my specific expertise on this redesigned unit post-Care 2000 implementation.	92%	8%	0%	0%	0%
Physician staff	Deployed ancillary services increase my effectiveness and response time to the patient's changing situations.	56%	18%	16%	7%	3%
Physician staff	Because of Care 2000, caregivers are more competent as they carry out their duties.	52%	16%	15%	8%	9%
Physician staff	I receive positive feedback regarding care on redesigned units from patients and families.	55%	23%	9%	7%	6%

SOURCE: Managed Care Quarterly. Exhibit from "Cost Reduction Using Patient-Focused Care Concepts," by Glenn H. Snyder and J. Philip Lathrop (1995). As cited by the Mercy Healthcare constituent surveys.

Although generally positive results are experienced by those that implement patient-focused care programs within their institutions, there are still many challenges that remain. Employees anxiety levels increase until they see how the changes affect them personally. Managers see revised organizational charts that no longer indicate a box on the chart for their position. Physicians are realizing that their patients are now being cared for by a few cross-trained generalists rather than a larger, more scattered group of specialists.

The long list of lessons necessary to learn throughout the process of implementing patient-focused care, in order to realize the most desirable outcomes, is summed up throughout this paper.

* Consistent executive level vision of change with consensus among the management group. This process is enabled through the clear definition of individuals roles and accountabilities.
* Communication and leadership as the foundation for cultural change is laid as well as clearly focusing on the vision.
* Learn from the innovators rather than reinvent the wheel.
* Prioritize goals and initiate changes that have the highest-rate of-return.
* Changes are more effective if made in groups of departments rather than one department at a time.

* Be willing to take risks by implementing high-priority changes house-wide in order to gain critical mass in cost reductions.
* Develop the tools necessary to determine the outcomes whether positive or negative. An up to date Information System is critical to capture this data on a daily basis.

Snyder insinuates that the experimental time for patient-focused care is over and that the new challenges are to expand the process outside of the hospital setting into ambulatory and home care. He further points out that organizations must continue to develop ways to sustain the changes, including: continual focus on teamwork and cost-effectiveness; innovative information systems allowing point-of-care access to an electronic patient record; and futuristic governance arrangements to foster empowerment and individual accountability (51).

Chapter V

DISCUSSION

The previous chapters have provided evidence that the process of redesign or restructuring the delivery of healthcare in hospitals, utilizing the concept of patient-focused care, was a necessity. Healthcare costs continued to rise over the years for many reasons, one being the result of rapidly changing and improved technology. The methods of reimbursement were drastically changing and the number of uninsured Americans continued to rise. The 1990s are now recognized as the decade to meet the demand for drastic change in the delivery of healthcare. As pointed out in previous chapters, hospitals that were not willing to change and meet the needs of the market, would not survive.

Summary

Chapter four has provided the most up to date information available in the literature, reviewing the successes of facilities that have implemented the concept of patient-focused care. Hospitals that have executed their plans to carry out the changes necessary for patient-focused care delivery are now demonstrating millions of dollars in savings and have credible documentation of improved physician and patient satisfaction. Although nearly half of all the hospitals in the United States are in the process of either

considering or implementing some form of patient-focused care, the success of three organizations in 1996 were brought to the forefront. The three organizations that have proven track records of implementing patient-focused care and have risen to the top in the health care industry, as it relates to this concept, are Mercy Healthcare in San Diego, California, St. Mary Medical Center in Long Beach, California and Spohn South located in Corpus Christi, Texas.

Table one in chapter four is a comparison of the processes utilized in implementing change. Each of the participating hospitals restructured to increase their competitiveness and anticipated outcomes that would encompass improvements in operating costs, quality and consumer satisfaction. All three of the institutions assumed a similar set of guidelines for patient-focused restructuring.

* Deployment/decentralization of services or moving services as close to the patient's bedside as possible
* Multiskilling/cross-training staff in order for a smaller number of staff to meet a majority of the patient's needs
* Process simplification in order to eliminate unnecessary steps, rework and duplication of efforts administratively
* Management and organizational restructuring to flatten the organization so that it is designed around the continuum of patient care
* Empowerment to push accountability, responsibility and control down to the lowest level possible

* Integrated care/team work to encourage collective rather than a departmental focus

All three facilities deployed services as close to the patient function areas as possible. The table indicates that there were some variations, however these variations were only a result of semantics. All clinical services that were not considered advanced were deployed. Advanced services within radiology, pharmacy, laboratory and physical therapy were maintained in core departmental spaces as a result of state and federal laws prohibiting cross-training. Spohn South was the only facility that developed the role of a case manager to ensure the communication between all the cross-trained staff. In the area of process simplification, Mercy Healthcare was the only facility that actively reviewed their processes through their Continuous Quality Improvement Council. The other institutions were less formal. St. Mary Medical center and Spohn South restructured their management along patient-defined business center lines. An executive was placed in charge of each multidisciplinary business center. This allowed for accountability for profit-and-loss at a lower level than the Chief Executive Officer. Under the subtitle of empowerment, each facility had a different level where empowerment was recognized, however all realized that in order for the process to be totally successful, empowerment was necessary at the staff level. Finally, the integrated care team structure at this point in time was the least structured. Although there were as

many similarities as dissimilarities throughout, each facility recognized successes in the implementation process.

Table two in chapter four is a summary of investments required for each case organization which included:

* Capital for facility, equipment and information system changes
* Incremental wages incurred for design, development and training
* Consulting fees

The range of investments further indicates the diversity that the case organizations had with their approach. Mercy Healthcare decided to incorporate substantial facility changes to enable patient-focused care operational changes. This included such items as built-in medical supply cabinets in every room and special rooms on each unit for pharmacy and laboratory services. Mercy and St. Mary hospitals were of comparable size based on licensed beds while Spohn was significantly smaller, explaining differences in the full time equivalent (FTE) baseline, the numbers of starting admissions and the starting adjusted patient days. The primary purpose of this table was to highlight the capital investment. In order to make the cumulative net savings, annotated in figure six, relative, the equivalent patient days had to be adjusted to allow for the variance based on the size of each hospital. In order to calculate the economic outcome of implementing patient-focused restructuring, assumptions were made that wage rates and service offerings would be constant or otherwise stated, that salary and

wage costs were factored out for expansions of service during the analysis period. Their net wage and salary reductions should average over five percent on a volume-adjusted basis, as shown in figure six. To put this into perspective, the average hourly salary of an employee at a local area hospital, comparable to the size of Mercy Healthcare, is $13.53. A five percent savings would be approximately sixty eight cents per hour, per employee or the equivalent of $1,414.40 savings per year. Mercy Healthcare has 1,882 FTEs, multiplied by the per employee savings of $1,414.40, would equal an annual savings of $2,661,900.80. As previously noted in chapter four, these organizations realized substantial reductions in length of stay due to improvements in service responsiveness and decision making. These process changes enabled a quicker turnaround of laboratory and other diagnostic test results and a higher level of unit-based clinician control over patient care decisions. The result of cross-training coupled with wage and salary reductions have driven these organizations' overall costs per case down by an average of eight percent as noted in figure seven.

Organizations that are experiencing savings of this magnitude are realizing that these savings are a product of three main factors: the level of change implemented, the size of investment required to effect the change and the time frame for implementation (Snyder 48). The level of change varies little among organizations. Investment and time frame contributed the most to the differential economics of the implementation projects.

A progressive reduction in time frame and investment appears to be a result of two things: the willingness to take risks such as implementing patient-focused care housewide versus departmentally; and a concerted effort to minimize the level of investment through prioritization of the changes.

Table three in chapter four demonstrates the results of quality and service study excerpts completed at Mercy Healthcare. Although their patient satisfaction scores were commendable prior to implementing patient-focused care, a two percent increase is to be applauded. Medication errors dropping a total of two and five tenths per thousand days is significant. From a Risk Management standpoint, medication errors can have a significant impact on the bottom line. If a medication error results in a death or disability, the financial impact on the institution could be staggering. The decrease in patient falls of three falls per thousand days also has a financial impact difficult to measure. One fall that results in a fractured hip may cost an institution multiple thousands of dollars. Decreasing the bloodstream infection rate by .05 per hundred discharges also has a potential for financial impact. Antibiotics, supplies and other follow-up diagnostic procedures to treat a bloodstream infection is exorbitant. Medication errors, patient falls and bloodstream infection rates also increase the length of stay depending on the severity. Extending the length of stay may cost a hospital upwards of $7,000 per day. The process improvement that resulted in decreasing the admission time from

fourteen minutes to less than two minutes is significant. This allowed the patient quicker access to the care that is necessary for recovery, rather than spending time in the admitting department answering redundant questions by excess employees that do not participate in actual care giving. Finally, table three points out that laboratory results were turned around in almost half the time. This was a result of cross-training clinical staff to collect the necessary laboratory samples, run simple tests on the unit where the patient is located and provide the primary care giver with the results. Decreasing laboratory turn-around time, as pointed out in previous chapters, eliminated retesting as a result of lost laboratory specimens, increased patient confidence in the hospital, improved physician satisfaction and decreased unnecessary costs.

Mercy Healthcare also surveyed several constituents in order to determine their satisfaction with the changes that resulted in the concept of patient-focused care. Table four indicates their responses to the survey questions. The first group surveyed were the care partners. Care partners are non professional, cross-trained, multi-skilled care givers, partnered with a professional care giver. Seventy nine percent of this group agreed that patient care delivery had improved as a result of this concept while twenty one percent disagreed. Seventy eight percent felt their expanded role allowed them to provide better care and twenty two percent disagreed. Seventy percent agreed that they were more satisfied since the implementation of patient-focused care, while thirty

percent did not agree. Although the majority indicated that patient care has improved and they feel that their multi-skilled training allows them to provide better care, the number of care partners that are satisfied with their job is approximately eight percentage points less. The on-unit specialists, cross-trained administrative or service employees, on the other hand all agreed (100%) that they prefer applying their expertise on the redesigned unit. This phenomena is further substantiated among healthcare providers in the St. Louis market. Service and administrative staff on traditional nursing units are more flexible than the clinical care givers and less resistant to change. On the other hand, there is more technical cross-training necessary for the clinical staff covering a wider variety of expertise, which has a tendency to be more threatening to the professionals. The responses of the physician staff indicates seventy four percent of them agreed that deployed ancillary services increases their effectiveness to treat their patients and only twenty three percent disagreed. Also it is interesting to note that this is the first group that had no response. Physicians routinely do not take time out to respond to surveys. The positive in the three percent that did not respond is that ninety seven percent did take the time to respond. The physicians showed support, with sixty eight percent agreeing that the care givers are more competent, while twenty three percent disagreed. The most impressive response by the physician staff is the fact that patients and their families gave positive feedback as a result of the redesigned unit. Seventy eight percent of the patients and their

families have provided positive feedback while only sixteen percent disagreed that the redesigned unit is a positive delivery model.

As pointed out in chapter three, the recognized experts in assisting institutions develop the concept of patient-focused care are Booz, Allen and Hamilton, Inc. and the Anderson Consulting firm. Booz, Allen and Hamilton, Inc. were consulted by the three institutions discussed in chapter four and assisted them in successfully developing their patient-focused care models. The premise of this consulting firm is that facilities wishing to embark on a journey to convert their existing delivery model to the patient-focused care concept, must either have in place or develop the information system to support this endeavor. As a result of an exhaustive study of the topic of restructuring or redesigning the delivery of patient care to a patient-focused care concept, the literature overwhelmingly supports the notion that information systems must be upgraded and updated in order to be able to support successes in the restructuring process.

Limitations

Several limitations were encountered during the process of research on the topic of redesigning or restructuring an institutions existing model of delivering patient care to the new model of patient-focused care. First of all, there still remains only a few consulting firms that contribute assistance in the field of developing patient-focused care models. This leads to a lack of

consulting support among hospitals that are in a competitive market within any given city. On the other hand, there is now sufficient documentation of successful conversions to patient-focused care that facilities that are willing to share their data with hospitals from other cities that are not in their competitive market. This process may now be accomplished by a representative group from one hospital visiting the successful program of another hospital.

Secondly, only a few failures were discussed in the early stages, 1989-1990, of facilities that were shifting to this new model of delivery. The literature after 1990 does not provide evidence that there are failures in developing this concept, although clearly all programs cannot be successful. As a result of this lack of documentation contact was made with a large area hospital within the St. Louis area that was known to be implementing the patient-focused care concept. The individual interviewed preferred anonymity because of her position in the facility and her status on the "patient-focused care committee". In effect, the committee felt they had done all the right things as a result of exhaustive research. It was determined that as a result of the baseline standards of success that were gleaned from the literature a consultant would only be an additional unnecessary expense. The executive group and the board of directors recognized the need for change as well as committed the financial resources necessary. In addition, the information system essential to commit to the project was in place. Employee meeting updates were held frequently in

order to solicit their buy in, and patient satisfaction surveys indicated a need for change. According to the interviewee, the final implementation process was a total failure. The failure was attributed to the fact that the physicians on staff at this facility were not consulted at any point in the planning or implementation phase. The review of the literature clearly pointed out that all consumers, including physicians, were key to the success of any change process. As a result of this lack of communication, physicians moved their practices to other facilities within the city. It was communicated to the patient-focused care committed that the physicians felt betrayed by the facility and were insulted to think that their input for care of the their patients was not important. This failure to communicate to a key customer group was thoroughly covered in the literature. It is believed that if a facility clearly followed all the steps of success outlined in this project, that a successful transition from the current delivery of care to the new patient-focused care model would be ensured.

Suggestions For Future Research

There is enough evidence to support the fact that healthcare providers need to restructure or redesign their method of delivering healthcare and that patient-focused care is now a proven method of success. In the literature, only hospitals of rather large bed capacities, usually at least five hundred beds, were studied. These hospitals had the most to gain financially by changing their system

of care and drew the most attention because of their size and popularity. The majority of hospitals in the United States are far smaller, generally less than one hundred beds. These facilities also will need to change in order to meet the demands in the future of healthcare. Researching the challenges that these smaller facilities may face and how they differ from larger facilities would be interesting. One might presuppose that implementing patient-focused care in smaller institutions may be a far less complicated process. The literature reviewed supported the fact that an upgraded or updated information system was critical to the success of the patient-focused care concept. Would the impact of an inadequate or non existent information system in a rural hospital be the same as in a large urban or suburban hospital?

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